Quantum EVO H.264 – Installation and User manual

Installation and programming manual for Vista's Quantum EVO H.264 range of DVR.

Including: Q4-XXXh (No DVD or FSK)
QE04-XXXhf
QE08-XXXhf
QE16-XXXhf
(XXX – denotes hard drive size)

This page is intentionally left blank

CE INFORMATION

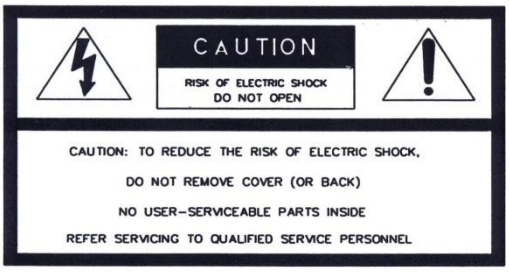
The product must be installed according to the currently valid installation regulations for EMC to guarantee the designed use and to prevent EMC problems.

The device supplied with this manual is according to the EC, EMC Directive, 89/336/EEC & LVD 73/23/EEC

Standard used for showing compliance with the essential requirements of the device:
EN 55022
EN 61000-3-2
EN 61000-3-3
EN 50130-4
EN 55024
LVD: EN60950-1

ELECTRICAL SAFETY

Explanation of electrical safety symbols


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance.

Contents

SAFETY PRECAUTIONS **6**

CONTENTS OF PACKAGING **7**

FEATURES **8**

FEATURES **8**

FRONT PANEL **9**

Q4-xxxh (No FSK telemetry) *9*
QE04/8/16-xxxhf *9*

REAR PANEL CONNECTIONS **12**

ALARM, KEYBOARD AND RS485 TELEMTRY CONNECTIONS **12**

REMOTE CONTROL **13**

OSD DESCRIPTION **14**

MENU TREE **15**

DEFAULT PASSWORDS **17**

MENU NAVIGATION **18**

MENU SETTINGS **20**

Main menu page *20*

DISPLAY **20**

Camera Setting: Brightness, Saturation, Contrast, Hue and default *20*
Camera Covert *21*
Camera Name *21*
Spot Setting *22*
OSD Setting *23*
Live Setting *24*

RECORDING **25**

Alarm *28*
Presets on Alarm *29*
When any of the four alarm sensors are triggered it is possible to send up to 4 PTZ cameras to preset positio ns or activate preset tours. *29*
Motion *30*
Schedule *31*
Duration *32*
Priority *32*

SYSTEM **33**

Basic *33*
Disk *36*
Account *37*
Program Update *39*
Sensor *40*
PTZ Setup *41*
PTZ Controller *41*

NETWORK **50**

EVENT **54**

SEARCHING VIDEO FOOTAGE **58**

Date / Time Search *58*
Event Search *59*

Calendar Search *59*

ARCHIVING EVIDENCE TO DVD/CD OR USB **61**

LOG **63**

CLIENT VIEWER SOFTWARE **64**

Installing software *64*
Connection *64*
Logging on *65*
Live Monitoring *66*
Remote search *69*
ARCHIVE *71*
Remote Log *73*
Info *74*
Remote Setup: (Menu settings - Same as DVR) *75*
Recording *78*
System *87*
Event *98*
Local Search (viewing downloaded footage) *100*
Local Setup *103*
PAN, TILT, Zoom, Focus (Remote telemetry control) *105*
Firmware Upgrade *107*
Quit (Exiting Client program) *107*

APPENDIX 1 ..... **108**

ALARM SENSOR INSTALLATION *108*

APPENDIX 2 ..... **111**

SETTING INTERNET SECURITY SETUP FOR WEB CLIENT ON WINDOW XP/2000 & WINDOW VISTA SERVICE PACK 2. ..... *111*

APPENDIX 3 ..... **115**

DYNAMIC IP (Supporting DDNS Server) *115*

APPENDIX 4 ..... **118**

SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER *118*

APPENDIX 5 ..... **119**

MAKING A PARTITION ON AN EXTERNAL USB HARD DRIVE *119*

SAFETY PRECAUTIONS

CAUTION BEFORE USE

Please read this manual before installing or using the Vista Quantum DVR.

Please keep this manual in a safe place, to allow for future reference

For the safety and proper use, The DVR is marked with various symbols. Please read these to prevent injury of financial loss.

INSTALLATION SITE

Ensure installation position is level, secure and adequately ventilated.

Avoid installing close to sources of humidity or water.

CONTENTS OF PACKAGING

Quickl user guiderl

Power Cable

Remote Controller

Battery

USB2.0 Mouse

Installation CD

FEATURES

● Convenience

- User-friendly GUI (Graphical User Interface)
- Easy-to-use menu structure
- Easy-to-use recorded data search (Time, Date, Motion, and Alarm)
- Easy-to control via Front Panel, IR remote control and USB 2.0 mouse.

● Stability

- Auto restart after power interruption
- DB structure offers data stabilisation and better storage utilisation

● Expandability

- Remote DVR's can be controlled using the supplied software client viewer.

● Technology

-Embedded LINUX OS

-Maximum record rate 100 fps

-High-resolution & high-quality H.264 algorithm

-Uses watermarking & scrambling technologies,

-H.264: 1 ~ 2 Kbytes per image with resolution 360x240

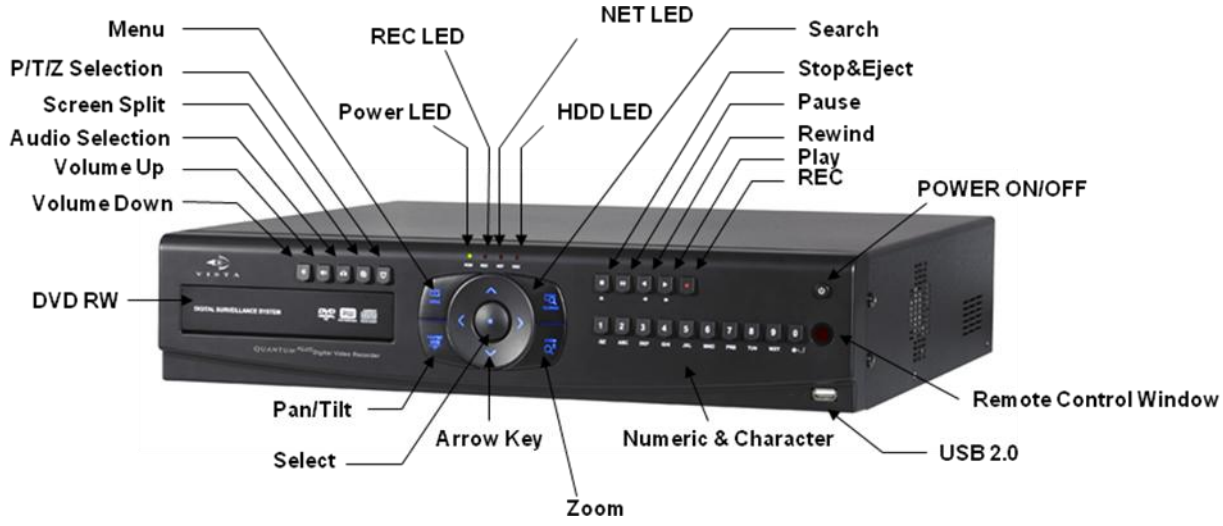
● Functionality

- Variable recording function (normal, alarm, motion, schedule, audio, Time Lapse)
- Vista Coax FSK and multi-protocol RS485 Telemetry
- Full channel real-time monitoring
- Live monitoring, recording, playback, backup, remote access simultaneously
- Multi channel playback
- Variable events notification to e-mail, buzzer or PC Client system

FRONT PANEL

Q4-xxxh (No FSK telemetry)

QE04/8/16-xxxhf



(1)LEDs

- REC: Recording status (When recording is on, the red light will flash)
- POWER: System Power On/Off (When power is on, the green light will be illuminated)
- NET: Network status (When network is connected, the light will lash)
- HDD: HDD status (When the system is reading or writing to the HDD, the light will flash)

(2) USB 2.0 PORT

- USB2.0 connector, for downloading to USB pens / drives (plus upgrading firmware)

(3) POWER BUTTON

- System Power On/Off

(4) NUMERIC & CHARACTER

- Used for individual camera selection and selection of numbers & letters within the setup menus and searches

(5) MENU

- Displays the menu on the screen

(6) SEARCH

- Entering search mode

(7) PLAY ▶(▶)

- Playback of the recorded data
- When in play mode press again to enter fast forward mode.

(8) REWIND (◀)◀

- Reverse play of recorded data
- When in play mode press again to enter fast rewind mode.

(9) PAUSE (▌▌)

- To freeze picture on playback mode and live mode.

(10) STOP / EJECT (▉)

- To stop playback and go back to live mode.
- To eject DVD-RW

(11) REC (●)

- It starts & stop manual recording, password protected.

(12) VOLUME UP & DOWN (🔊 🔉)

- To increase or decrease the volume.

(13) ARROW KEY

- Moves the cursor while in menu mode

(14) SELECT

- Menu selection

(15) PTZ Selection

- PTZ Channel selection

(16) Screen Split

- Selection of multi screen functions

(17) AUDIO Selection

- Switches between audio channels

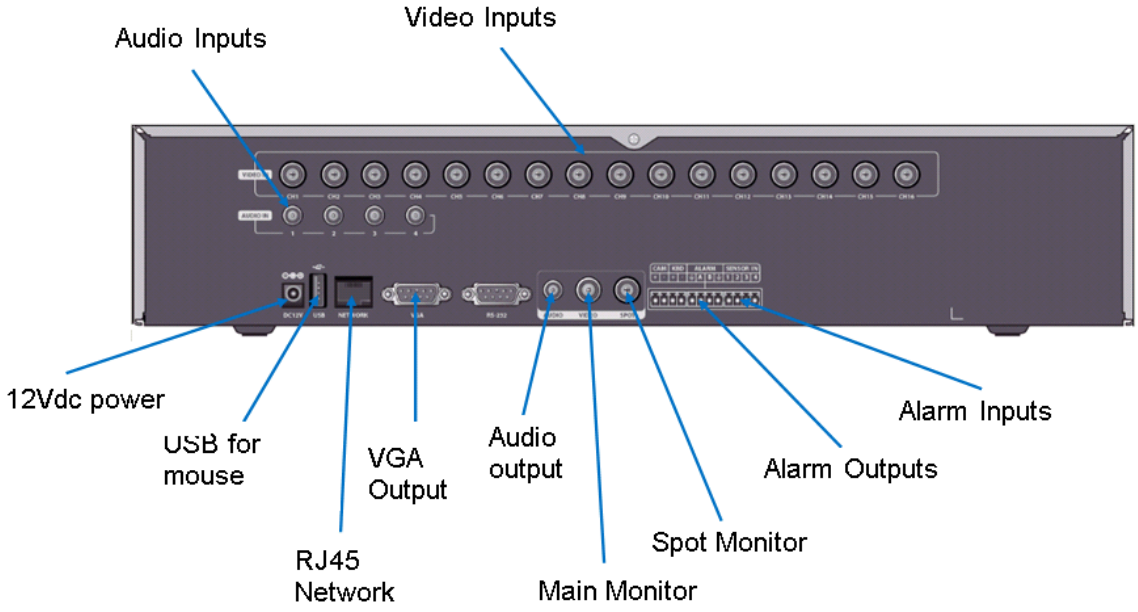
(18) PAN / TILT

- To control P/T/Z, press this button to browse virtual key on screen.

(19) ZOOM

- ZOOM P/T/Z camera in and out

REAR PANEL CONNECTIONS

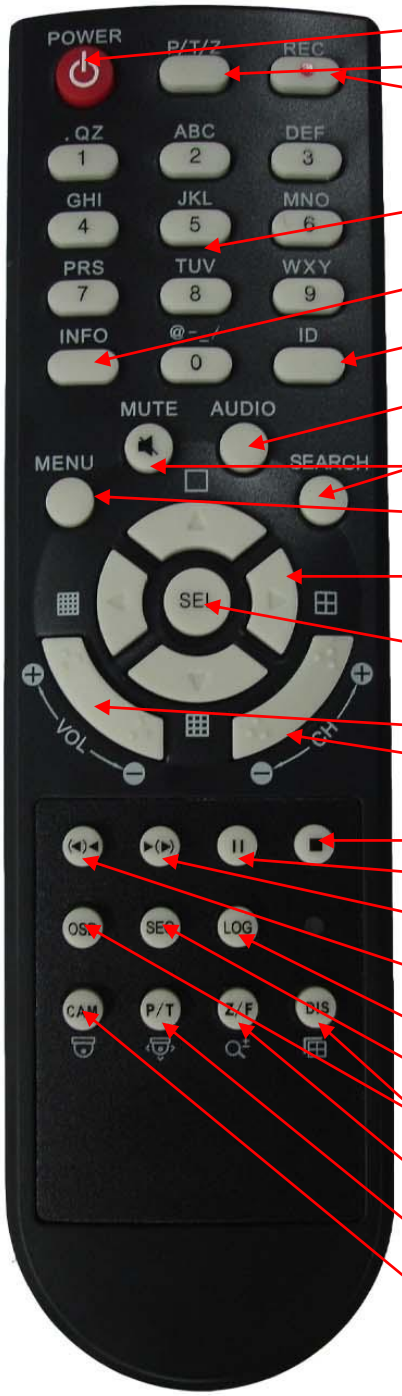


ALARM, KEYBOARD and RS485 TELEMTRY CONNECTIONS

Connection for Remote Keyboards, RS485 telemetry, Alarm inputs and Alarm outputs are all made via the pull out screw terminal connectors on the rear of the unit as shown below:

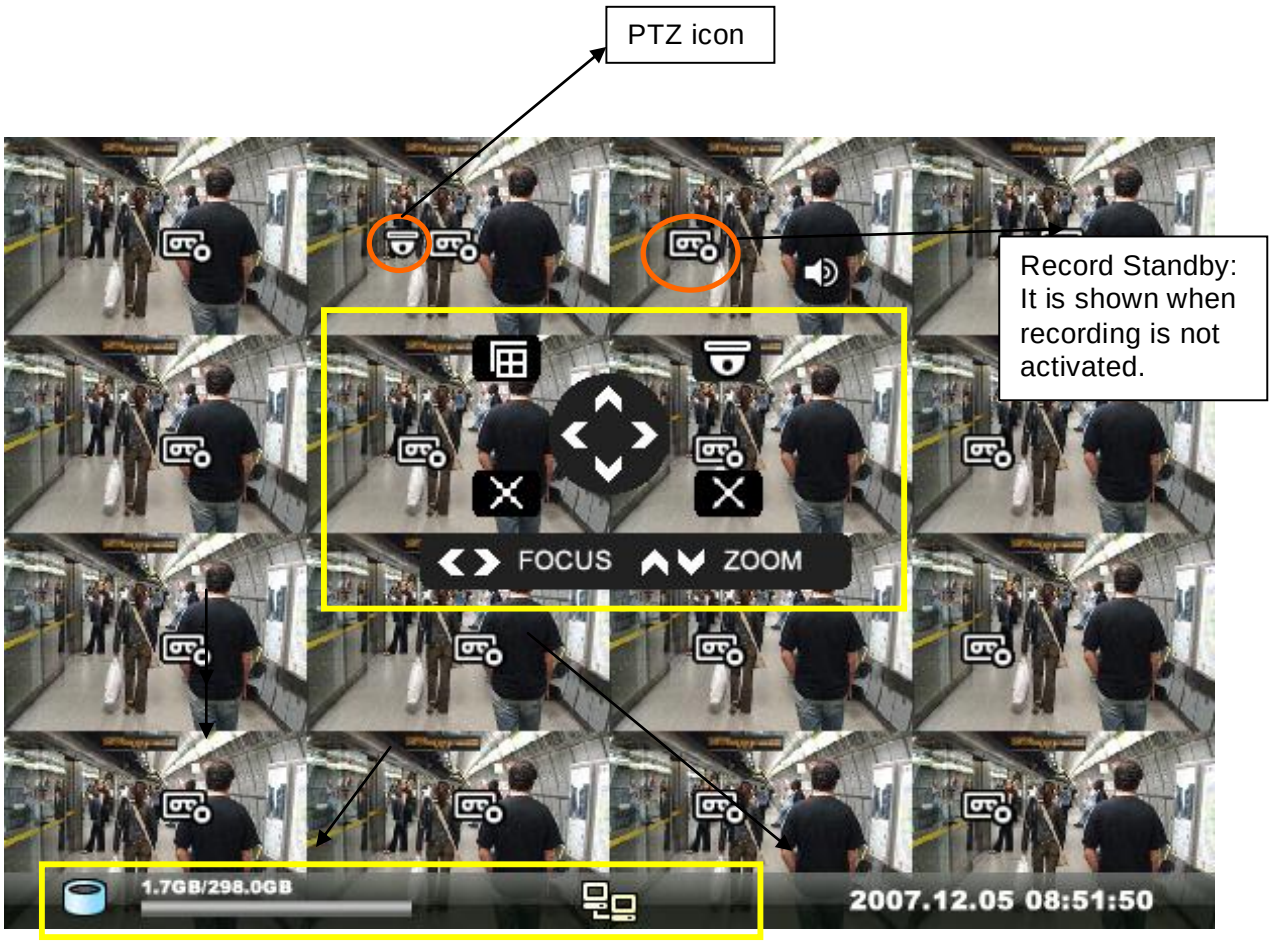
CAM + /-	:	Used for the connection for RS485 Telemetry
KBD +/-	:	Used to connect VKBD4 remote keyboards
ALARM A/⏚	:	Used for Alarm output A
ALARM B/⏚	:	Used for Alarm output B
SENSOR IN/⏚	:	4 Alarm Inputs

REMOTE CONTROL



1. Power: Power ON/OFF
2. PTZ: Not used
3. Rec: Start & Stop Recording
4. ⓪~⑨: Camera selection and titling
5. INFO: Direct access system Info.
6. ID: use for selecting DVR IR address
7. AUDIO: Audio channel switching
8. SEARCH: Entering search
9. MUTE: Audio Mute
10. MENU: Entering system menu
11. ARROW & SPLIT: Menu navigation or split screen selection keys
12. SEL: Enter key in menus
13. VOL"+,-": Up, down volume
14. CH "+,-": Up, down channel(s)
15. ■: Stopping playback
16 ⏸ : Pause
17. ▸(▸) : Play(or fast forward)
18. ◂ (◂): Reverse play
19. LOG: Direct access Log list
20. SEQ: Hot key Spot SEQ
21. OSD: Operating OSD ON/OFF
22. DIS: Channel Division
23. Z/F: Zoom/& Focus
24. P/T: Pan & Tilt
25. Cam: camera selection for PTZ control

OSD DESCRIPTION



The Status Bar shows HDD capacity, Network connection, Time, etc using by icons.

-HDD capacity : 1.7GB is used out of 298.0GB

-Network connection : It is shown that admin or user is connected.

-Date/Time

*Others :

-Backup

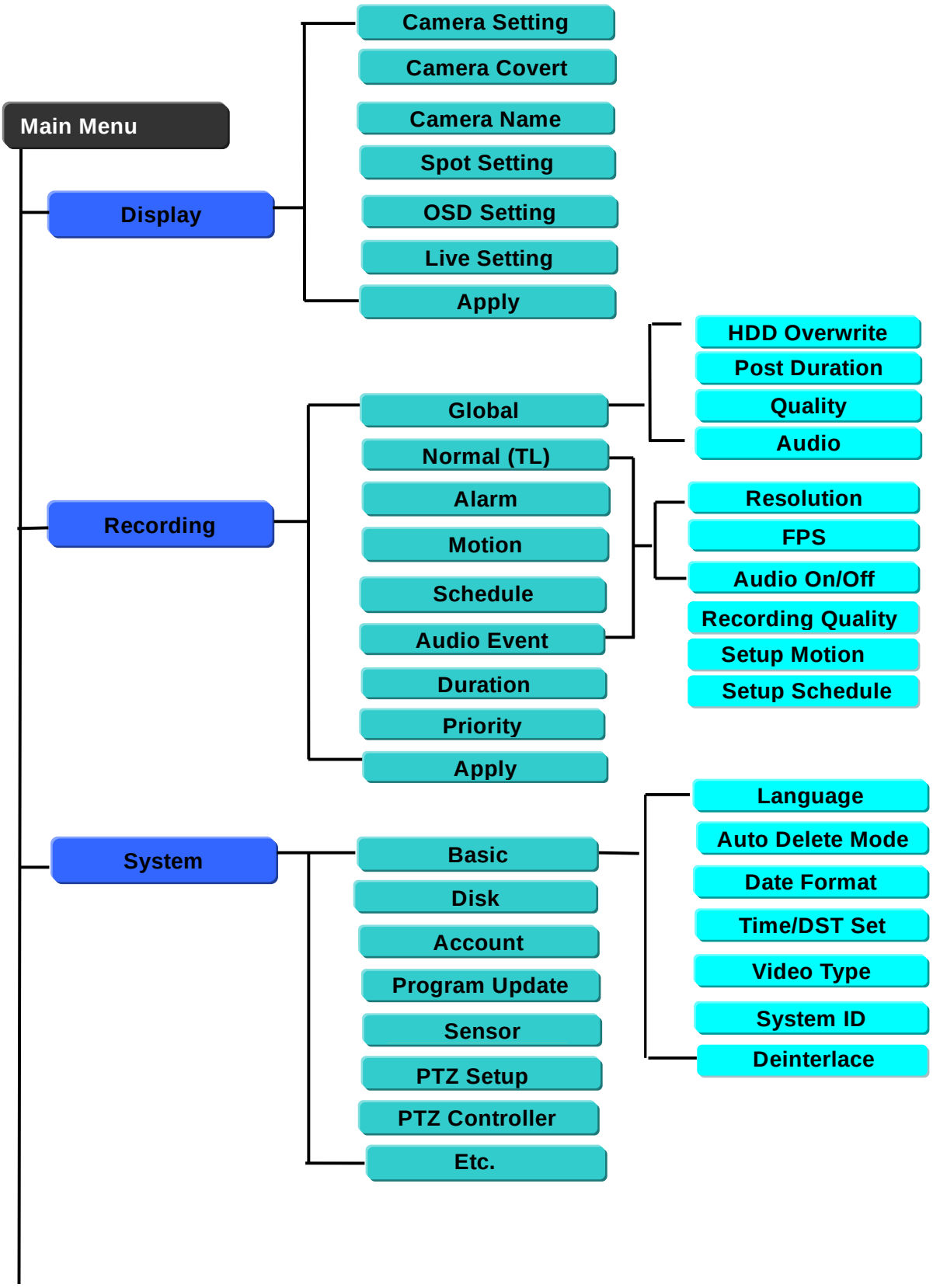
-Mute

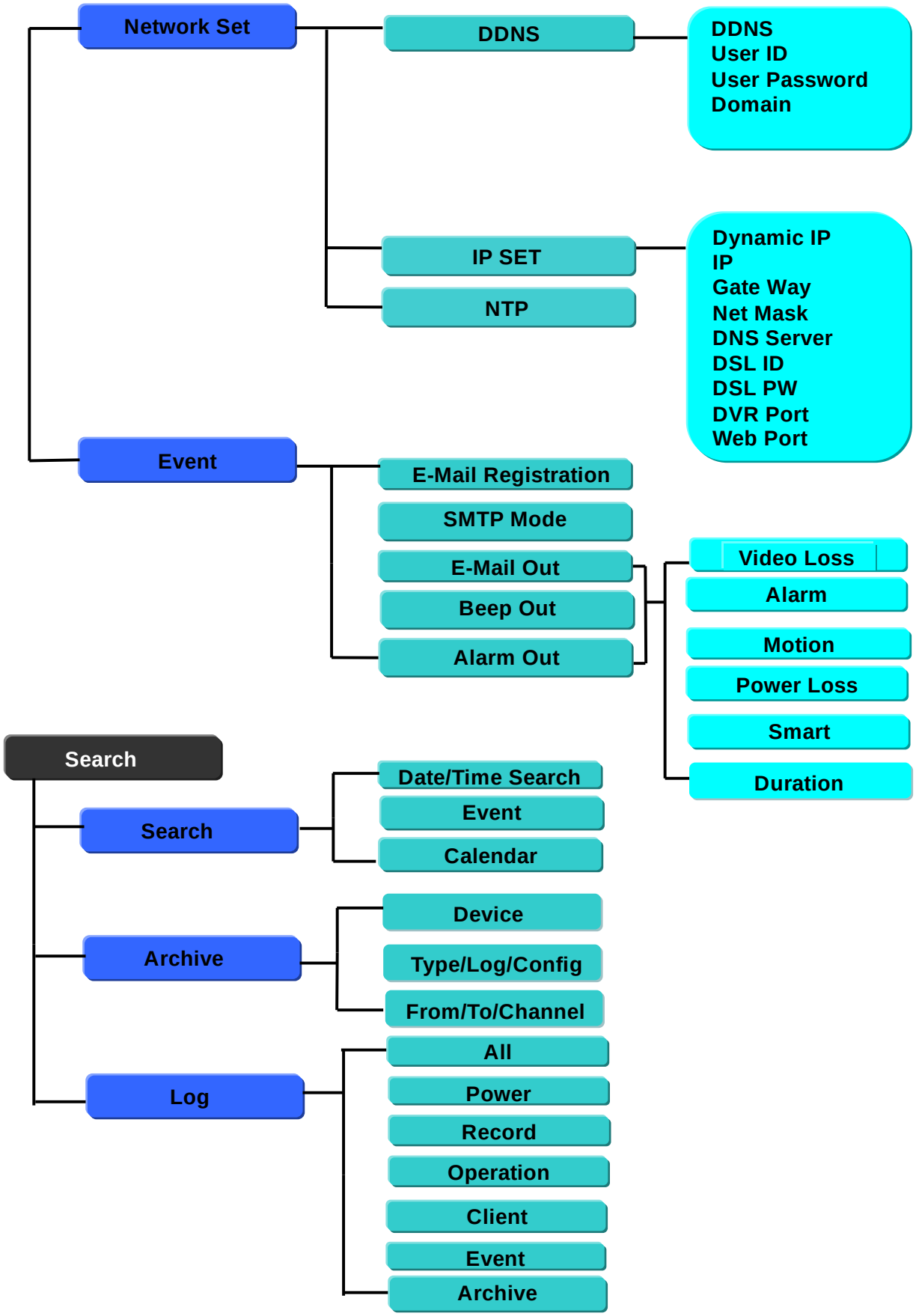
-USB Stick:

-Mouse connected:

This screen shows PTZ control of camera 2. The on screen arrows will allow control of this camera.

MENU TREE


Main Menu
Display
Camera Setting
Camera Covert
Camera Name
Spot Setting
OSD Setting
Live Setting
Apply
Recording
Global
Normal (TL)
Alarm
Motion
Schedule
Audio Event
Duration
Priority
Apply
HDD Overwrite
Post Duration
Quality
Audio
Resolution
FPS
Audio On/Off
Recording Quality
Setup Motion
Setup Schedule
System
Basic
Disk
Account
Program Update
Sensor
PTZ Setup
PTZ Controller
Etc.
Language
Auto Delete Mode
Date Format
Time/DST Set
Video Type
System ID
Deinterlace


Network Set
DDNS
DDNS
User ID
User Password
Domain
IP SET
NTP
Dynamic IP
IP
Gate Way
Net Mask
DNS Server
DSL ID
DSL PW
DVR Port
Web Port
Event
E-Mail Registration
SMTP Mode
E-Mail Out
Beep Out
Alarm Out
Video Loss
Alarm
Motion
Power Loss
Smart
Duration
Search
Search
Date/Time Search
Event
Calendar
Archive
Device
Type/Log/Config
From/To/Channel
Log
All
Power
Record
Operation
Client
Event
Archive

DEFAULT PASSWORDS

Front Panel

A Password is required if you need to: Log on; enter the menus; down power; stop recording or changing an IP setting.

Logging ON

Before the system can be used it is necessary to Log On as a user, he rights of each user can be managed by an administrator level log on

Press MENU on the front panel, or right click and select the MENU icon. The following box will be displayed played asking for password.

The default Password is: **00000000** (8 zeros)

To select a different use press the Select key in the centre of the unit, use the up and down arrows to choose, then press the Select key again to confirm. Then enter this users password.

Viewer Software

When using the supplied Viewer software, the default logon details are:

User ID is "***admin***" (not case sensitive).
Password is "**00000000**" i.e. 8x Zero's
(Admin ID cannot be changed, as this is the full administrator ID)

Click on arrow to view a quick connection address book for the last 22 units that the software has been connected to.

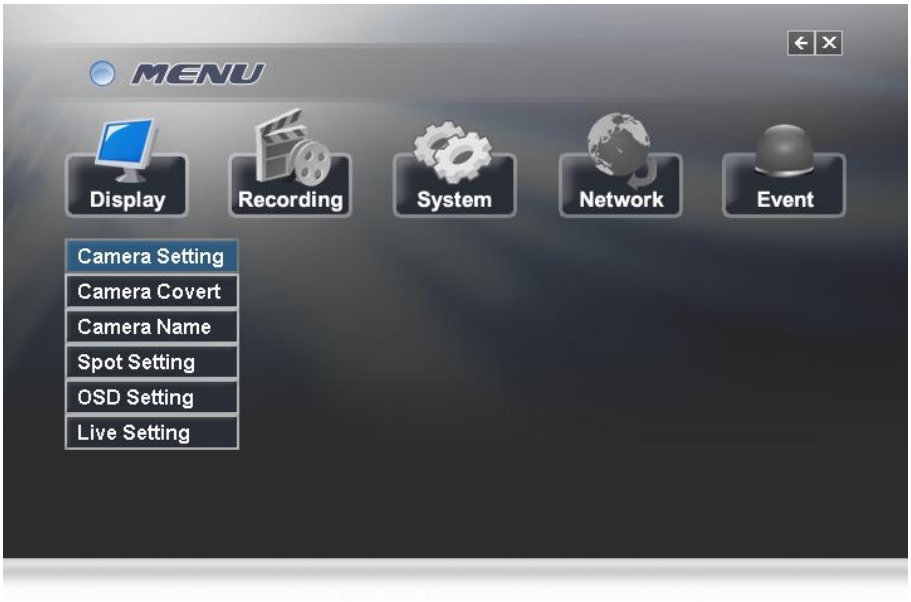
This uses the description to quickly identify each unit.

MENU Navigation

To enter the set-up menus, the user has to have the required access rights and be logged on (see page 19) press the Menu button or right click with mouse on screen and select the menu icon. The following screen will be displayed.

Front Panel or IR remote control

First select the user name by pressing select key and using the up and down key.
Next, enter the password (default password is 00000000 – 8 zeros). Use the numerical buttons. The following menu page will be displayed.

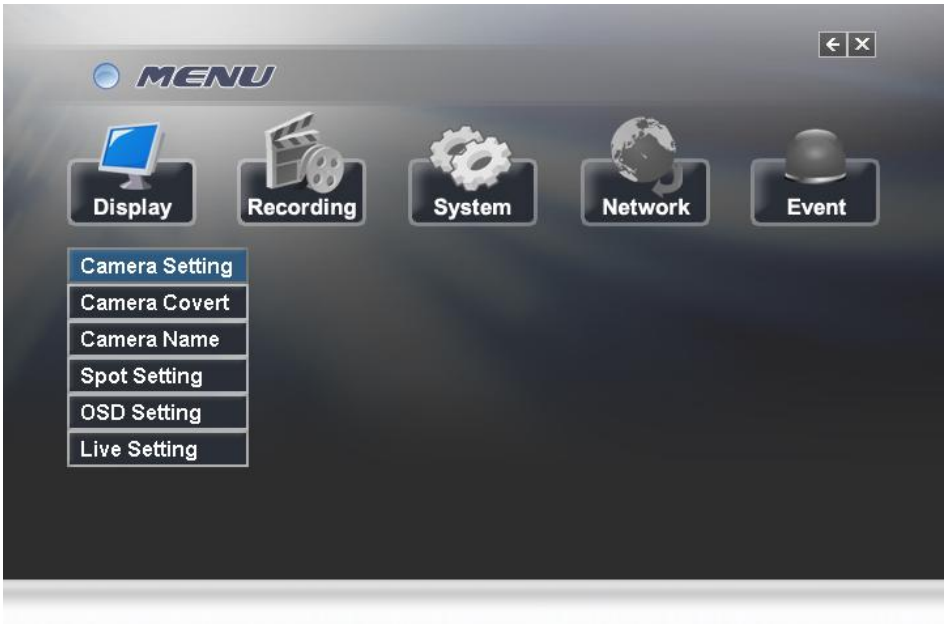


All menus are navigated using the left / Right / Up / Down and the Select button.
To step back out of the menus press MENU button

Mouse control

Left clicking the mouse brings up the following display, from this right click on the menu icon to display the password box, use the mouse to select the user name and enter the password.

Note: This display is also used to select Search mode, Turn on the telemetry mode.



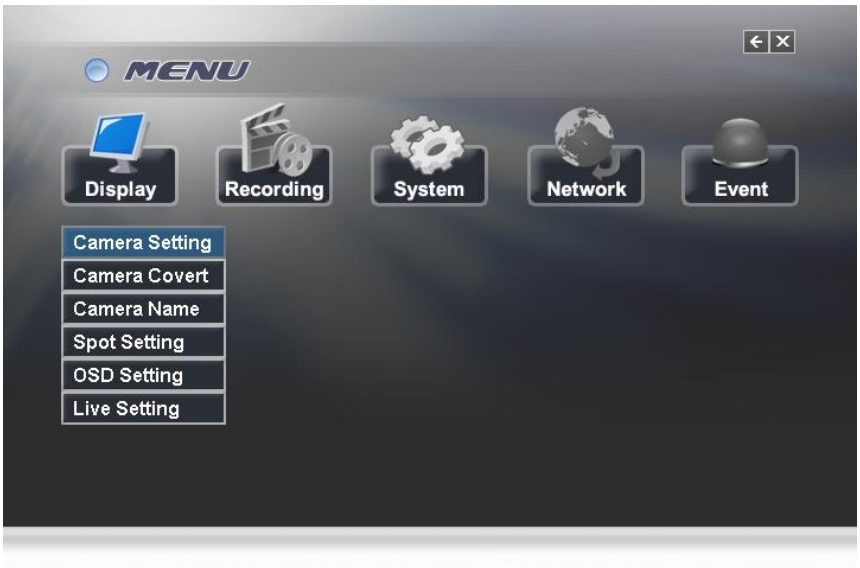
If Menu has been selected the following screen will be displayed.
Select Sub menus by clicking on the relevant title.
The method of altering t he value of a segment within a menu page will vary slightly depending on the page:

1. Clicking on a segment will toggle through available values
2. Click on icon at top of list will change all channel values
3. Click on the box and the following keyboard will be displayed:

Use the keyboard to fill in titles etc, followed by OK to enter the value.

MENU Settings

Main menu page



DISPLAY

Camera Setting: Brightness, Saturation, Contrast, Hue and default

The picture displayed from each camera can be individually adjusted to balance the multi screen view.
Use UP(▲) / DOWN(▼) keys to select the cell to be altered, then press select to turn the box green, then use the numeric keys to change the values.
Alternatively use the mouse to select the cell, the on screen keyboard will appear select the value and click OK

Camera Covert

Cameras can be hidden from the viewer in live or play back mode.

Select the camera to be made covert using the up and down keys, then press select to turn the camera green, toggle between on and off with the up and down buttons.
Alternatively use the mouse to select the camera and click between on and off.

In order to view covert cameras in Live or Playback, it needs to be turned off in the menus, this is requires the necessary user rights.

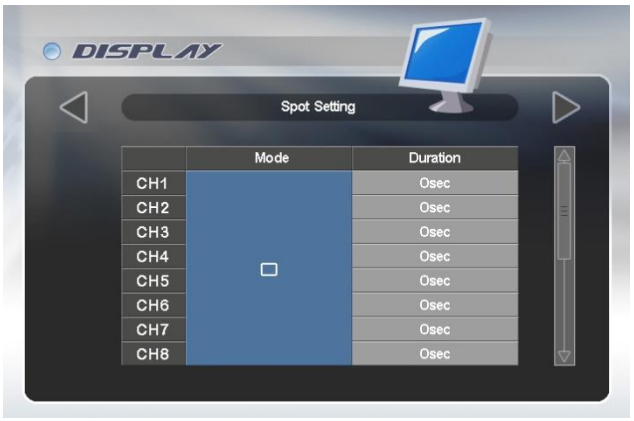
Camera Name

Each camera can be titled using the alphanumeric buttons on the front panel or the mouse. Each title can have up to 32 characters, if there are too many characters to display in 1 line, it will be shown as _... For example, 'FIRST MEETING ROOM' -> 'FIRST MEETIN…'

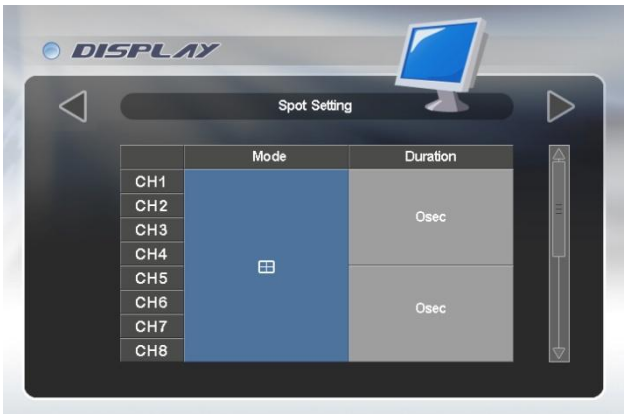
Use the Up and Down arrows to select the title to be altered, press the select key to turn the title green. Use the left and right arrows to select the character position and use the Alpha-numeric keys to select the character (Similar to SMS on a mobile phone). When complete press the select key to exit.

Alternatively use the mouse to select the title to alter, the on screen keyboard will appear, enter the title followed by the OK button.

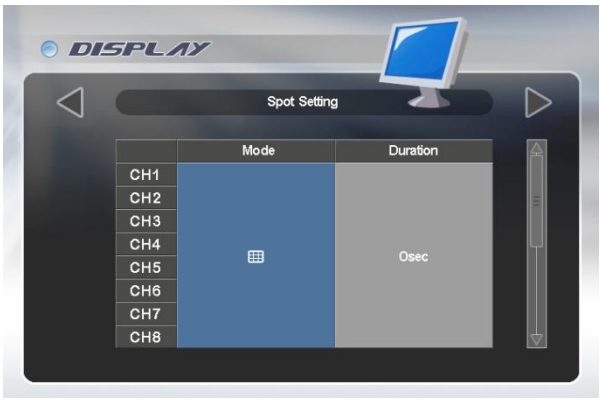
Spot Setting



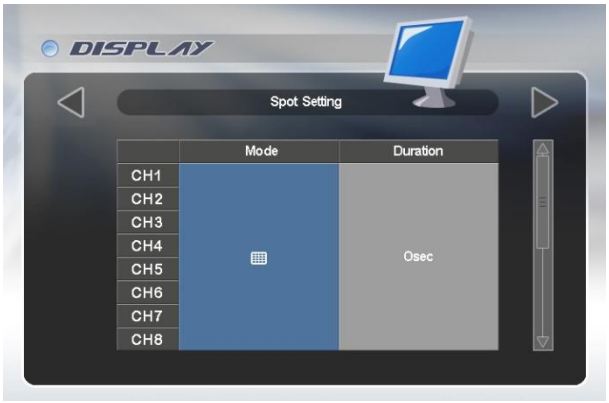
<Single Screen>



<Quad Screen>



<9 Channel Divisions>



<16 Channel Divisions>

Spot output is used to configure the second monitor output. The Spot monitor can respond to Motion or can be configured for full or multi-screen sequences.
Use the Select key to turn the Mode box from Blue to Green, use the up and down arrows to select the mode between multi-screen options; Motion.
Once the mode has been selected, you can select either a duration or On/Off option (Mode dependant). Use the Select button to turn the box from blue to green then use the Up and Down keys to alter value. Press select to turn back to blue.

Alternatively, use the mouse to select mode by repeatedly clicking in the Mode box. Then select the duration or On/off for each channel.

OSD Setting

On Screen Display Setting: Selecting information to be displayed on screen along with the video.

Status Bar

The display bar at the bottom of the screen can be set to be permanently on or to disappear after a preset period of time.

Event Display

Icons such as recording mode, motion detection can be displays or not (On /Off)

Camera Names

The camera title can be displayed or not (On/Off)

Blending

The opacity of the menus and Status bar can be set between 0 and 6, 0 is solid, 6 being very opaque.

Menu

The menu display can be set to time out after either 1 or 5 minutes.

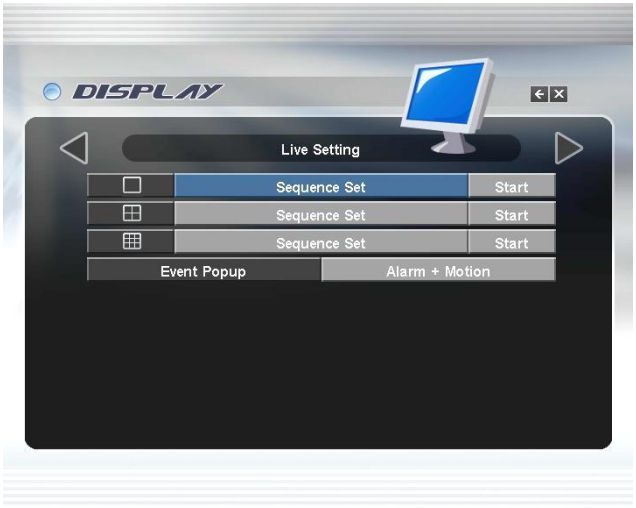
Password Entry

The password entry display can be set to time out after 1 or 5 minutes.

PTZ display

When in telemetry mode the on screen telemetry display can be set to be Always on or to disappear after a set period of inactivity 5 or 10 second or Off.

Live Setting



Sequence settings
The live settings are used to set up a sequence of either full screen camera images or multi screen displays

Use the Up and Down arrows to select either: Full Screen, Quad or Nine way split sequences. The display will change to allow individual sequence times to be set per channel or split screen option. Use the select key to turn the cell green and then the Up and Down keys to change the values.

Use the right button to move to “Start” press select, the main monitor out put will display this sequence.

Alternatively use the mouse to select the sequence required, and then select the duration.
Click “Start” to turn the sequence on.

To interrupt the sequence, simply select any camera.

Event Popup

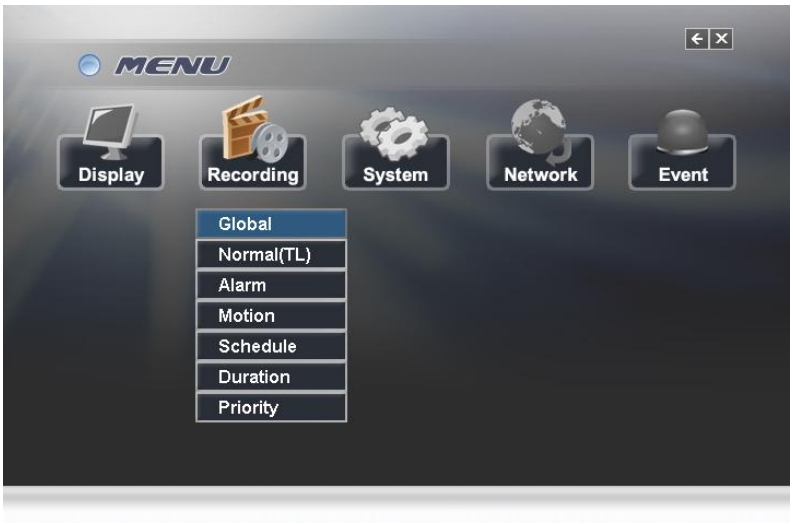
The Main screen can be set to display events, the options are:

Alarm: if the single alarm input is activated, then any camera that has the alarm function turned on will be sequenced
Motion: Any camera with motion will be displayed, multiple motion cameras will be sequenced
Alarm + Motion: this will display both alarm and motion cameras
OFF: No action taken

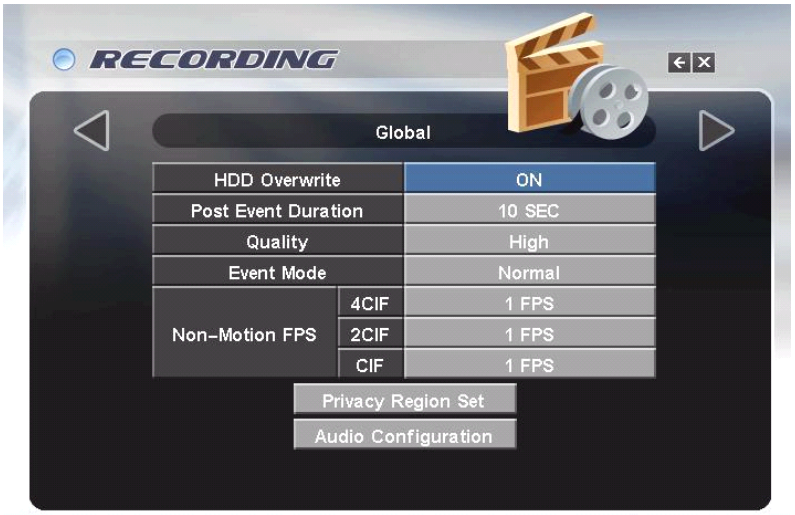
APPLY: In order to save any modified setting value, press “SEL” key when the “APPLY” section is highlighted. This action can be carried out within each Sub Menu.

RECORDING

All recorded data is watermarked to ensure that it is not tampered with. Using the software supplied the legitimacy of this data can be verified.



Global



HDD Overwrite

Generally this should be set to on to ensure that the DVR does not stop recording when the hard drives are full.

Post Event Duration

This is the time after which an event or alarm clears that the system continues recording for in the event or alarm mode.

Quality

The amount of compression applied to the recording can be changed between Best, Good and Standard.

Non Motion FPS
This is used in conjunction with the “Motion” recording section. In the motion recording section the Record Quality for cameras in motion is set globally.

Cameras inputs not showing motion will be recorded at the corresponding Quality and the rate set within the Non Motion FPS section.

Note: If non motion cameras are not to be recorded then set the FPS to 0 (Zero).

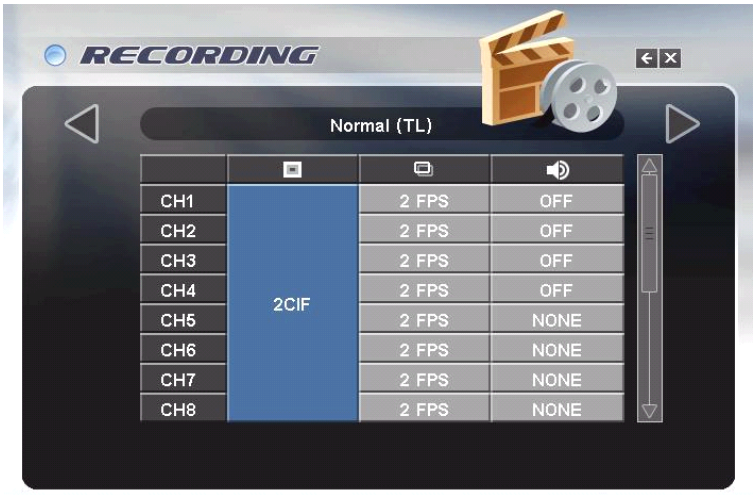
Privacy Region
A Privacy zone can be set to blank out any part of the image

Audio Configuration
Use this section to allocate which video input is to be associated with each of the 4 Audio inputs.

Normal (TL)

This allows each individual camera input to be configured for Normal (Time Lapse) recording, the Resolution, Fields Per Second and whether audio is being recorded can be set.

In CIF (360x288), 25 fps is available to each channel (total 400fps).
In 2CIF (720x288), 12.5 fps is available to each channel (Total 200fps).
In D1 (720x576), 6.25 fps is available to each channel (Total 100fps).



The record quality can be set globally to CIF, 2CIF or D1

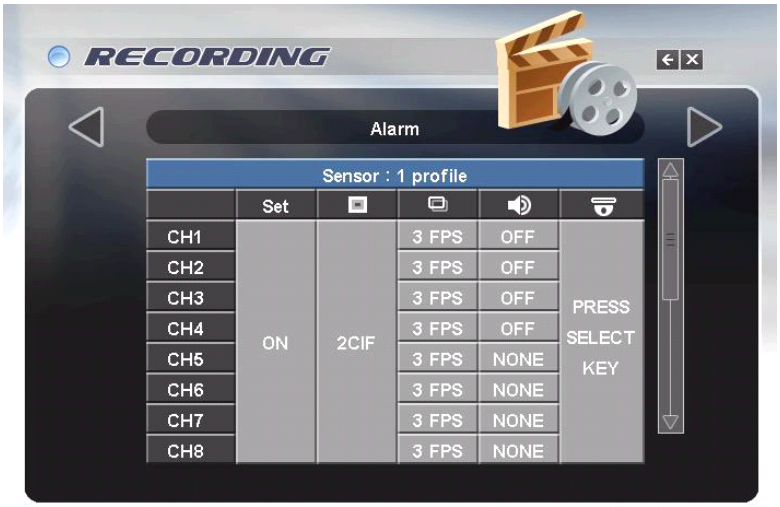
Note:
1. If set to CIF, then 100 FPS are available globally across all cameras.
2. If set to 2CIF then 50 FPS are available globally across all cameras
3. If set to D1 then 25 FPS are available globally across all cameras.

The record rate can be set individually per camera

The 4 Audio inputs can be set to record during the alarm event. See Audio configuration, in the Global menu, to allocate cameras to audio channels.

Alarm

There are four alarm sensor inputs on the rear of the Quantum EVO, an activation on any of these inputs can have a specific recording profile and control the actions of up to 4 PTZ cameras.



To enable the alarm/sensor input set this to ON

The record quality can be set globally to CIF, 2CIF or D1

Note:

1. If set to CIF, then 100 FPS are available globally across all cameras.
2. If set to 2CIF then 50 FPS are available globally across all cameras
3. If set to D1 then 25 FPS are available globally across all cameras.

The record rate can be set individually per camera.

Note:

1. If a camera is to be related to an individual sensor input, it is recommended that this camera is give a higher record rate and other cameras are dropped to a lower record rate.
1. Any camera input set to zero (0 FPS) will not be recorded while that sensor is active.
2. Any camera given a record rate other than zero will be considered in alarm mode and will be shown in the event log search, and a alarm icon will be displayed on screen.

The 4 Audio inputs can be set to record during the alarm event. See Audio configuration, in Global menu, to allocate cameras to audio channels.

Selecting this column will bring up a separate menu page to allow the configuration of “Preset On Alarm” actions. See below:

Presets on Alarm

When any of the four alarm sensors are triggered it is possible to send up to 4 PTZ cameras to preset positions or activate preset tours.

Motion

When operating in Motion detection mode the EVO will only record the cameras that motion is being detected on, the record rate for that camera will be at the rate set by the operator in the table below If motion is detected on multiple cameras, all motion cameras will be recorded.
The record rate for Camera inputs not showing motion can be set in the Non Motion FPS section of the Global record menu.

The DVR will display either a single camera if motion is only detected on one camera or a sequence of cameras if motion is detected on multiple cameras.

Set the Quality, FPs rate and Audio channel s as previous NORMAL record section.

The sensitivity per channel can be set to Low, med or High, this should be tailored each individual camera position.

Clicking on the associated icon will display a motion detection grid

The detection area is divided into a grid of 10x8 cells. Default is all cells in active mode (Pink). Use the Left right up down to move cursor and the Select key to toggle between active and inactive.

The mouse can also be used to select cells and toggle them on and off.

The motion detection is not recommended for external cameras.

Schedule

The schedule allows the Quantum DVR to be set to only record at particular times of the day. The timing setting, resolution and audio are global for all channels. However Images per second can be configured per channel.

Set the Quality, FPs rate and Audio channel s as previous NORMAL record section.

To set the timetable select the large SET box on the right of the menu page, the following page will appear. It allows each hour within the week to be set to be either Active (Orange) or Inactive (Grey)

Use the Up / Down / Left / Right buttons to navigate around the schedule and the Select button to toggle between on (Orange) and Off (Black).

Alternatively use the mouse to toggle between On and Off.

Duration

The Duration mode allows the user to set the: the number of days that they require to record for; the resolution; whether cameras are active or not; whether audio is being recorded. The user then sets the number of days of recording required, then the Quantum will automatically calculate best record rate to achieve these settings

Priority

The RECORD PRIORITY allows the mixing of the various record methods to customise the individual site requirements.

Example: A site may require Alarm recording at night, then a standard FPS recording during the day.

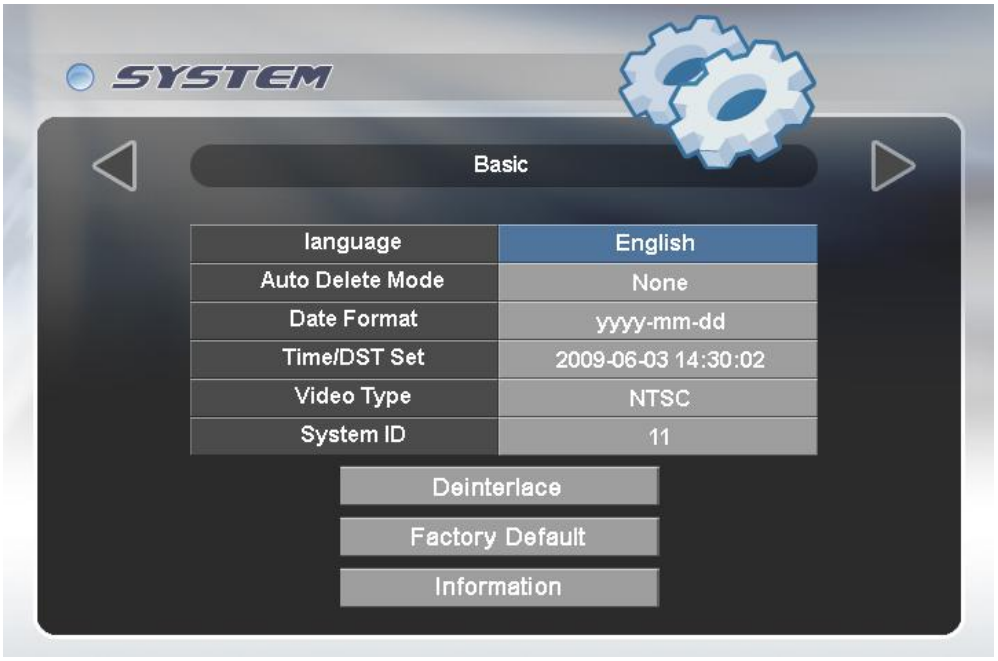
In this case the Schedule would be set for required FPS and resolution, and the timetable set for this recording between 8am and 8pm each day. Schedule would be set as 1st Priority. The Alarm settings would be configured as required and this would be set as the 2nd priority.

The Quantum would then record between 8am and 8pm at the Scheduled rate, then once beyond 8pm would look to the second priority and only record Alarm Events.

SYSTEM

Basic

User can set Language, Auto Delete Mode, Date Format, Time/DST Set, Video Type, System ID. Also, Deinterlacing, Initialisation and system Information are set from this page.



Language

The default is English. Italian, French, Hungarian, Slovak, German, Russian, Chinese, Dutch, Spanish, Portuguese, Japanese Danish and Polish are available.

Auto Delete Mode

Auto Delete Mode can be set to automatically erase recorded older than a certain number of days. This can be set between 0 and 99 days.

Date Format

The default is dd-mm-yyyy. Other date formats available are: mm-dd-yyyy / / yyyy-mm-dd.

Time/DST Setting

The DVRs time can be set by clicking on the time and date displayed in this section, the on screen keyboard will appear. Set the time and date and click Ok, next select the country to enable the Day Light Saving mode.

PLAYBACK FOLLOWING TIME CHANGE

The DVR uses the time and date to index video on the hard disk drive so you can find it later. Changing the time can cause the DVR to work improperly, when you try to play back video. If you set the hour ahead, this is not a problem. But, if you set the hour back, there will be more than one recording with the same time stamp.
Such as during the October Daylight Saving Time changeover, if you try to search for video between 1 am and 2 am, the recorder may not operate properly because there will be two hours of recorded video during this time period. To view video during this overlapping time period, you must start playback before 1 am, then recorder will play both hours between 1 am and 2 a.m.
You cannot do a backward search through the overlapping time. But, you can do forward search.
The Time and Date and the DST time can be changed from the front panel, the Mouse or the Remote Control

Video Type

Video Type can set in this menu without rebooting or initialisation. The default is PAL, NTSC can also be selected

System ID

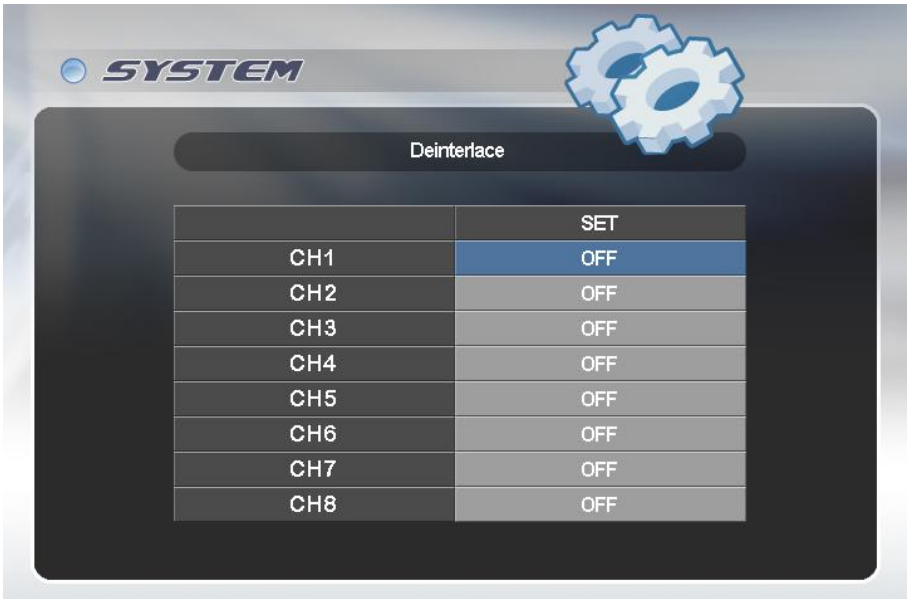
The remote control can be used to control up to 16 Quantum's, the ID number on each can be set to a unique address so that the remote will only control one at a time if they are in close proximity. The default is 11.

Repeated click on the ID value to change to the required number.

To select a unit on the remote control press the ID button, followed by the number, followed by the ID button again. The LED will flash slowly.

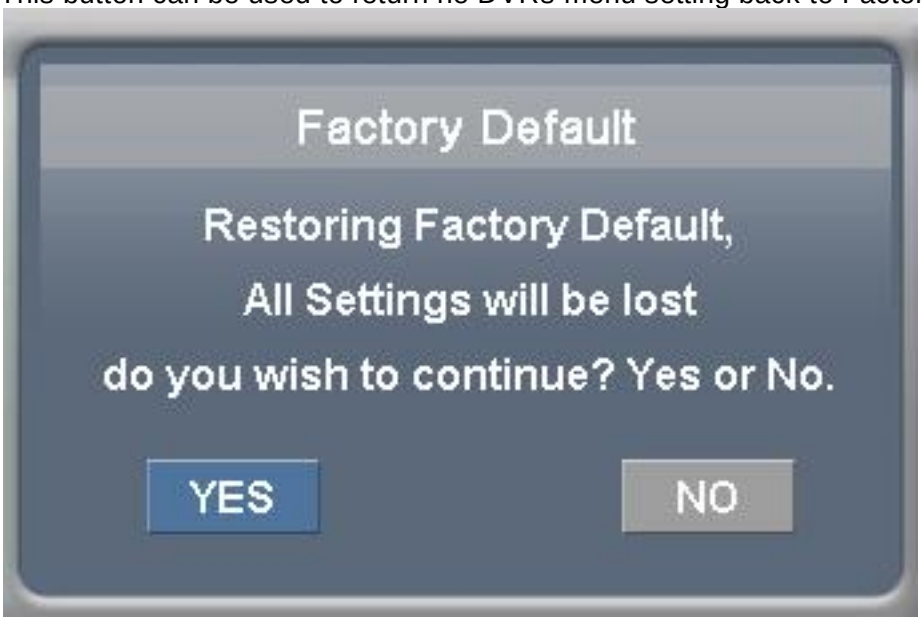
Deinterlace

This option takes out the judder associated with movement in 4CIF (D1) recording. Set camera channel to ON



Factory default

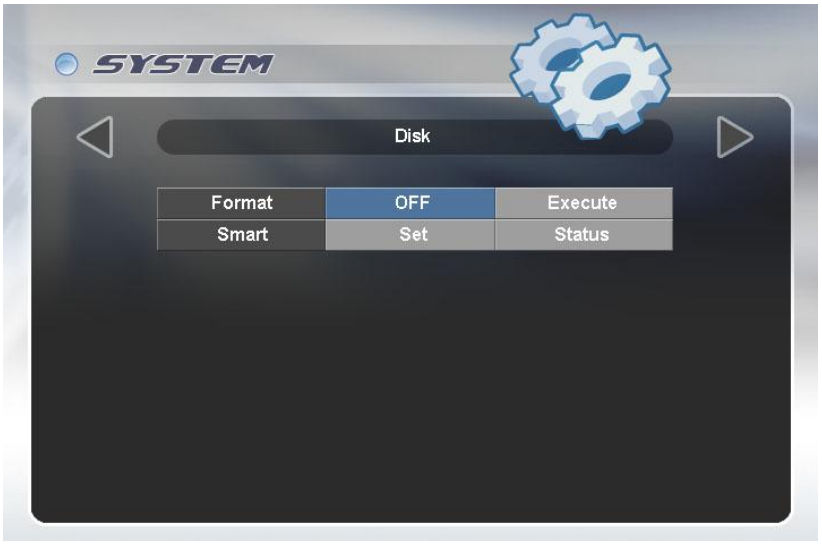
This button can be used to return he DVRs menu setting back to Factory default



Information

The Information Screen shows the hard disk size, current firmware revisions, IP address and MAC address

Disk



Format

Formatting of the drive is used when new drives are installed or you need to wipe all information on the disk.

Click on OFF to turn to ON, then click on Execute, click YES, to confirm

Smart

This function is used to keep a check on the health of the Hard disk. The parameters which can be monitored are:

1. Read/Write errors on the drive
2. Drive temperature.

To set enable these features, click on “Set”, three options will be presented:

Smart – Turn to on to enable feature
Temperature – Using the on screen keyboard set the temperature at which the warning is to be reported. (recommended setting 45)
Message Box - The message box can be turned on or off to give a visible warning. Alternatively and E-mail; can be sent if any problems occur (see the Event menu set-up section on page 51-53)

Account

The DVR can have the following different levels of operators, each with different users rights and passwords:

Admin level – Operators logged in at this level has full rights
Manager level – Operators logged in that this level as default have access to all except: Stopping Recording and Shutting down the DVR.
Users 1-4 - Operators logged in at this level Only have the ability to Search and play, Control PTZ cameras and get access via the network.

Each users rights, can be individually tailored to their own requirements, the amending of these rights can only be done by an Administrator level log on.

Amending operators settings and user rights

Click on the box beside Level, this will step through the 6 Operator set up pages, chose the operator required.

The operator ID can be changed using the on screen keyboard
The operators Password can be changed
The operators user rights can be amended:

Menu –	Allows access to the menu
Play/Search –	Allows access to the Playing back and Searching
Archive –	Allows the ability to download information
Rec -	Allows the ability to turn off recording
PTZ –	Allows the ability to control PTZ cameras
Network –	Allows the ability to view remotely with the client software
Covert –	Allows the ability to view coverted cameras
Shutdown –	Allows the ability to turn the power off from the front panel

Click on the “Rights “ box to show camera selection:
The cameras which each user can view can also be allocated.

Once the above has been set, **ensure that the Activate box has been ticked**.

Automatic timed log out

The system can be set to automatically log out a user after a certain amount of time if no key presses have been made. The operator level has to have been activated before this can be set. While in the account setup page for the User, click on the middle icon at the bottom of the menu page , the screen will change to show the following:

Click on the boxes adjacent to “Local” for the time out period for operation form the front panel. Click on the box adjacent to “Client” for the time out period for operation form the client software. This can be set to either: Off, 15 mins, 30 mins or 1 Hour.

Archive log access

Access to the archive log is password protected, use this section to amend the password per user. This will allow traceability of which user has downloaded information.

Program Update

<u>Always turn off: Recording, Playback and Network access while upgrading the unit</u>

The latest firmware version can be upgraded through USB 2.0 Port using Memory Stick or

CD/DVD Media. When a memory stick is connected to the USB port, this symbol will be shown in the status bar of the screen.

Enter “menu”-> “System Set”-> “Program Update”. If the system recognizes the new firmware then, “New program found” will be displayed on the screen.
Next press the “SELECT” button.

Processing percentage will be displayed.

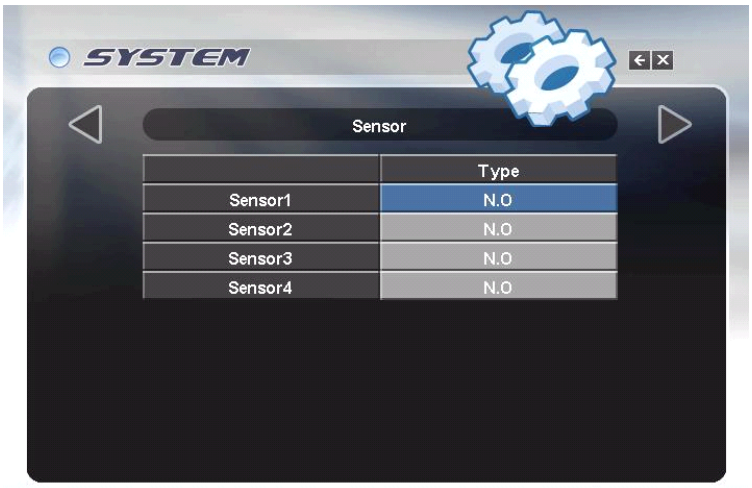
NOTE.

1. If the system doesn’t recognize the new firmware, “New program not found” will be displayed.
2. USB compatibility has been tested successfully with: Lexar Jumpdrive 128/256MB, Sandisk Mini Cruzer & Cruzer Micro 2GB, KINGSTONE 2GB, A-DATA 2GB, IMATION 2GB, SANDISK 1GB, SANDISK 512MB, MARUZEN 1GB

3. For system stability, please turn off 1) recording 2) playback 3) network connection during upgrading.
4. After updating program, reboot the DVR. The simplest way is press POWER button and enter the password.

Sensor

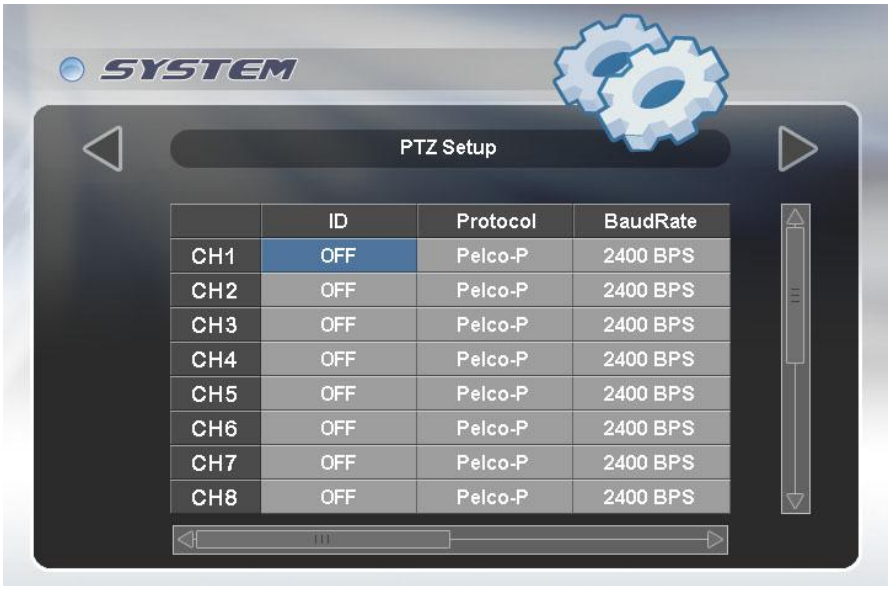
The 4 alarm inputs on the rear of the Quantum can be configured to be normally open (N.O), normally closed (N.C) or None.



For details on the alarm connections please refer to page 12 of this manual.

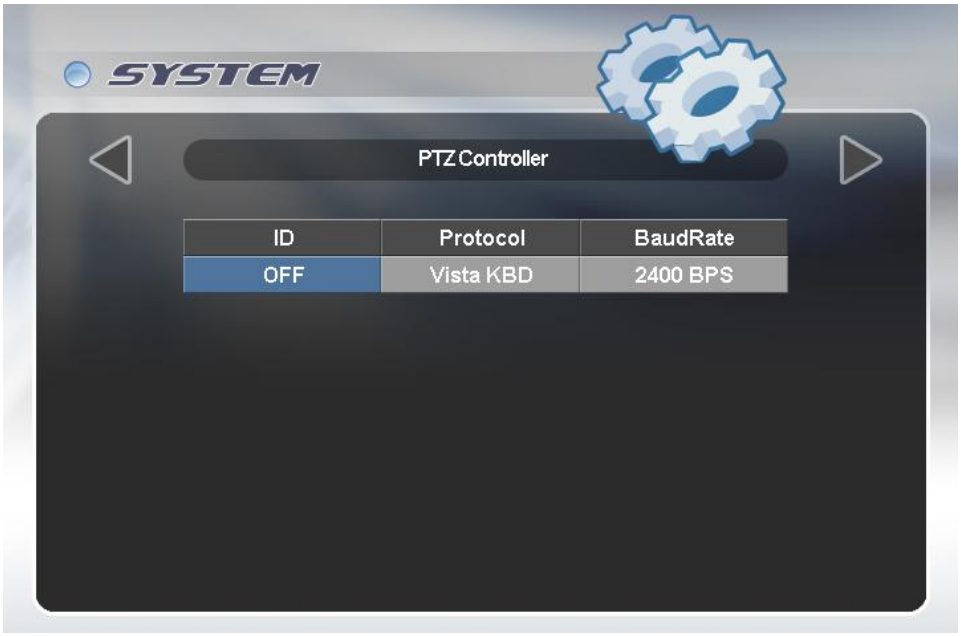
PTZ Setup

The Quantum EVO can control PTZ cameras via a RS485 connection on the rear of the DVR. The cameras can have individually selectable Protocols with a choice of: Vista PD, Pelco P or Pelco D. The Baud rate can also be selected.



PTZ Controller

The Quantum DVR needs to be setup to accept the VKBD3im or VKBD4 keyboard, as a default this will be set to the correct Protocol and Baud rate, the ID RS485 Address may need to be adjusted dependant on the number of PTZ cameras on the system. The Keyboard ID should not be the same as any of the domes on the system.



Telemetry connections and User Instructions

Remote Keyboard Connections

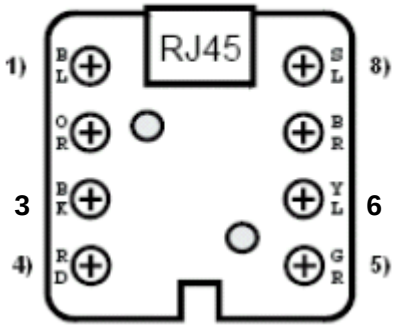
The connection of the VKBD4 keyboard to the Quantum EVO DVR, is made via the removable connectors on the rear of the DVR:

Use the KBD +/- connections, on a standard cat5 lead these are the Green/White for +ve and Green for -ve

If using the break out box and one of the RJ45 Leads supplied with the VKBD4 keyboard.

Connect pin **3** of the break out box the **Kbd(+VE)**
Connect pin **6** of the break out box to the **Kbd(-VE)**

Breakout Box Pins



Connect the break out box to the keyboard using the RJ45 patch lead.

More detail can be found in the VKBD4 manual

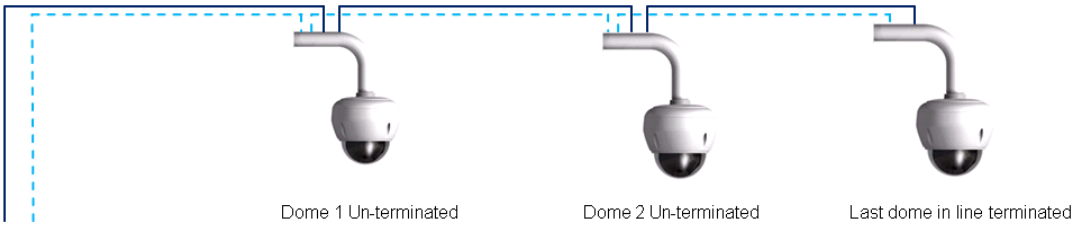
RS485 Dome Telemetry connections

The connection to RS485 domes is made via removable connectors on the rear of the Quantum. As Shown below:

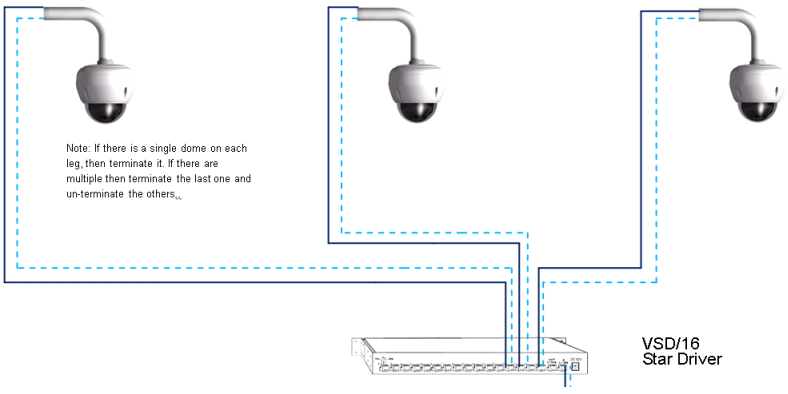
Use the CAM connector, connect the +ve to the +ve leg of the dome data lead and t he –ve to the –ve leg of the dome data lead.

The domes can be wired either in a Daisy chain or star configuration, examples shown below. If using a Star configuration you require a “VSD16” RS485 star driver.

Daisy Chain configuration



Star Configuration


Note: If there is a single dome on each leg, then terminate it. If there are multiple then terminate the last one and un-terminate the others.
VSD/16
Star Driver

PTZ user instructions

The telemetry function of the Quantum EVO can be controlled via 3different methods:

1. Front panel buttons
2. Remote control
3. Software viewer

Front Panel

Camera selection

The PTZ cameras can be controlled in either full screen or split screen mode. If in Split screen mode, press the camera selection key , the camera icon will step from one camera to the next on the split screen. When the icon appears on the camera to be controlled then press the PTZ key .

If in full screen mode then simply press the PTZ key .

Pan and Tilt control

To move the dome left / right / up or down use the arrows keys .

Zoom and Focus control

To select Zoom and Focus press the Zoom Key ,

Zoom + =

Zoom - =

Focus Near =

Focus Far =

Preset positions

1. To store a preset position

Move the camera to the required position then press the record key followed by the number key of the preset to be stored (1 – 9)

Dependant on Dome or protocol you may then have to enter a password or exit from menus.

PowerDome PRO – use the Down arrow to move to the Enter command then the Right arrow to accept

VPDL6 – Navigate up, down, left and right in “Pan / Tilt Mode”

Enter key is Right arrow in “Zoom /Focus Mode”

2. To recall a Preset

Press the search key

followed by the number (1 -9).

Run Tour 1

To run Tour 1, press the search key

followed by the number 0 (Zero). The tour requires a keyboard to set it up in the domes menu.

Infra Red Remote control functions

Camera selection

The PTZ cameras can be controlled in either full screen or split screen mode. If in full screen mode press the camera selection key

, the camera icon will step from one camera to the next on the split screen. When the icon appears on the camera to be controlled then press the PTZ key

.

If in full screen mode then simply press the PTZ key

.

Pan and Tilt control

To move the dome left / right / up or down use the arrows keys

.

Zoom and Focus control

To select Zoom and Focus press the Zoom Key

,

Zoom + =

Zoom - =

Focus Near =

Focus Far =

Preset positions

3. To store a preset position

Move the camera to the required position then press the record key

followed by the number key of the preset to be stored (1 – 9)

PowerDome PRO – use the Down arrow to move to the Enter command then the Right arrow to accept

VPDL6 – Navigate up, down, left and right in “Pan / Tilt Mode”

Enter key is Right arrow in “Zoom /Focus Mode”

4. To recall a Preset

Press the search key

followed by the number (1 -9).

Run Tour 1

To run Tour 1, press the search key

followed by the number 0 (Zero). The tour requires a keyboard to set it up in the domes menu.

Dome Menu access

When controlling Vista PowerDome PTZ domes from the Quantum EVO, it is possible to enter the Dome's menu structure, using the Remote Keyboard, Front Panel Keyboard, Mouse or the Client software. The method from each device is slightly different; the following section will explain each method.

Remote Keyboard

1. Select Dome from the Keyboard, ensure the keyboard is in Pan and Tilt Mode (make sure the dome moves)
2. Select the dome menu key (from VKBD4 this is press and hold the camera key and press and release the Mode key

3. The Dome menu password screen will appear.
4. Use the Joystick to move around the menus, Enter is

and Escape is

   To exit the menu mode repeatedly press escape

, or move the joystick to the left.

Front Panel Keyboard.

1. Enter the Telemetry Mode, then Press Menu key, the

password box will appear
2. Enter 1,2,3,4, then hit select key
3. The Dome Password Menu will appear
4. The method for entering the password will vary depending on the dome type:

PowerDome PRO – use the Down arrow to move to the "Enter" command then the Right arrow to accept

VPDL6 – Navigate up, down, left and right in "Pan / Tilt Mode"

Enter key is Right arrow in "Zoom /Focus Mode"

Mouse control

1. Right click mouse
2. Mouse menu screen will appear:
3. Left click MENU

4. The password box will appear
5. ENTER 1, 2, 3,4, then click OK

6. The Dome Password Menu will appear

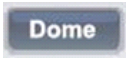
7. Navigate up, down, left and right in “Pan / Tilt Mode”

   Enter key is Right arrow in “Zoom /Focus Mode”

Client Software

1. While Client software is running select the dome required.
2. Enter Pan and tilt mode by clicking on the icon

3. The Pan and tilt control window will appear
4. Click on the central button
5. The following box will appear

6. Select the Dome Button 

7. The dome password menu will appear

8. The pan and tilt control window will change to the following
9. Use the arrows, SEL (ENTER) and PREV(ESCAPE), to navigate around the menus

10. To Exit the menu mode repeatedly press PREV.

11. To return to PTZ mode press the button.

NETWORK

(If the DVR is connected to a network, this icon will be shown in the OSD display)

This menu can only be accessed if the user has the necessary rights. (Default password is 00000000).

With in the Network menu the DDNS (Dynamic Domain Named Server), IP addresses, NTP and Live can be set.

DDNS

What is DDNS?

DDNS is a service that maps Internet domain names to IP addresses. DDNS serves a similar purpose to DNS: DDNS allows anyone hosting a Web or FTP server to advertise a public name to prospective users.

Unlike DNS that only works with static IP addresses, DDNS works with dynamic IP addresses, such as those assigned by an ISP or other DHCP server.

What this means is that the DVR does not need a Static IP address to be available for viewing remotely over the World Wide Web.

Please refer to Appendixes 4 on how to set up the DDNS service.

Using factory configured DDNS setup

To make using the DDNS service easier each DVR has been pre configured in the factory with it's own individual DDNS set-up, this uses the DDNS-DVR.COM service. To access this feature select:

DDNS-DVR.COM (Auto)

The Domain section of the menu will display the MAC address of the unit (16 digit number).

Note:

1. DYNAMIC IP must be set to: YES

2. Port forwarding has to be set-up in the router using the dynamically assigned IP address and the DVR Port set in the IP set section

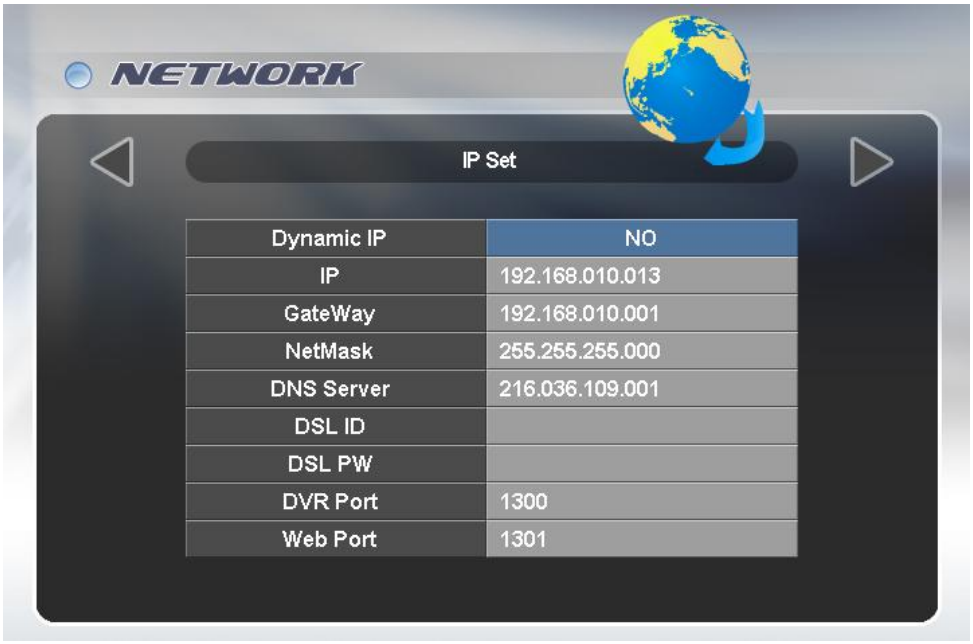
3. When connecting to the unit from the client software, the address to enter will have to be in the following format:

http://(16digitMACaddress)@ddns-dvr.com

IP SET

When a fixed IP address is being used, Dynamic IP should be set to NO
The IP Address, Gateway and Subnet Mask need to be set, these will generally be given by the Network Manager.
DSL refers to all types of Digital Subscriber Line such as ADSL and SDSL.

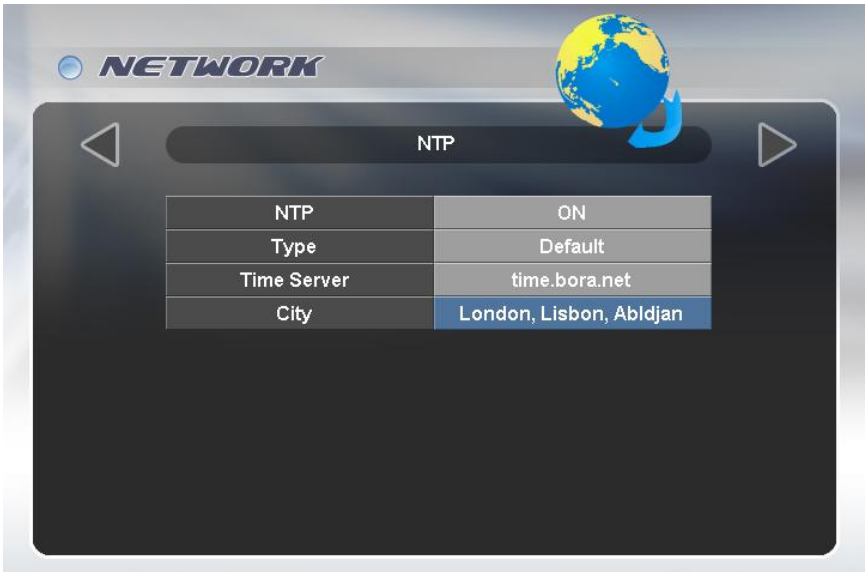
The DVR Port and WEB Port can both be changed if required, default are 2000, and 80 respectively.



NTP

The Network Time Protocol Setting allows the DVR time to be synchronised with an external time server.

The default is NTP OFF. When turned ON the type of service can be selected, options are Default (time.bora.net), Domain and IP. As shown in next diagram:



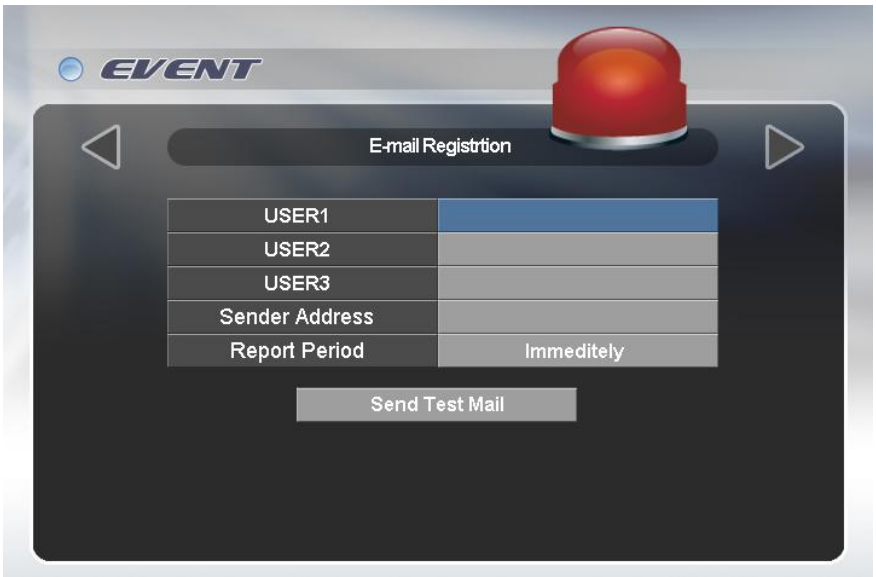
The Time zone can also be chosen within the City selection, use the right arrow on the front panel to change the city settings.

EVENT

This section is used to inform the user as to an event occurring, this can be by the sounding of a buzzer or by sending an E-mail to a predefined address.

E-Mail Registration

Within this section up to 3 users can be set-up to receive an email on the occurrence of an event such as Video Loss / Alarm / Motion or Power Loss. An E-mail will only be sent if the Quantum EVO is sitting on a network with access to the Internet, e.g. through a router.



The e-mail addresses are set via the alphanumeric buttons on the front panel, or from the on screen keyboard via the mouse.

The Sender Address is the address that will appear on the E-mail received by the user, this

should be set logically to identify the specific DVR. e.g. QUANTUMPLUS@NORBAIN.CO.UK

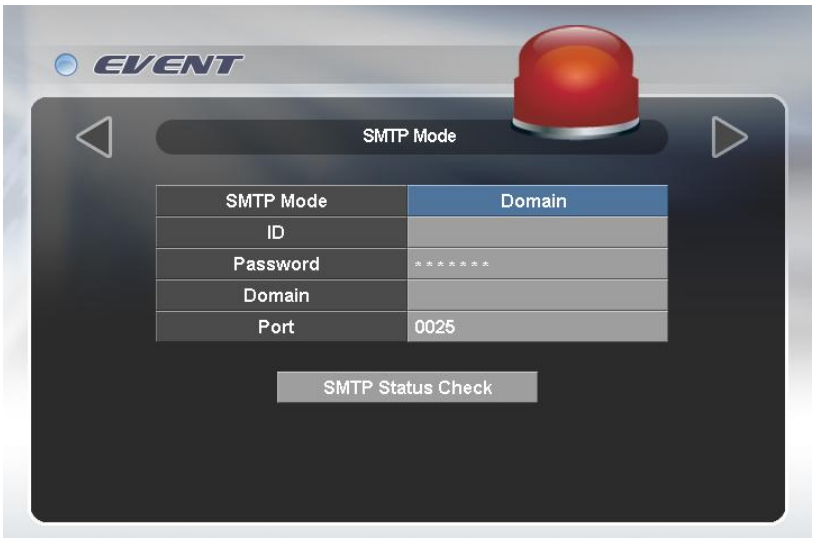
The report period is used to set how often e-mails are sent: Immediately on and event, Daily or Weekly

SEND TEST MAIL sends a test E-mail to the addresses so allowing the installer to verify if the setup is correct.

SMTP Mode

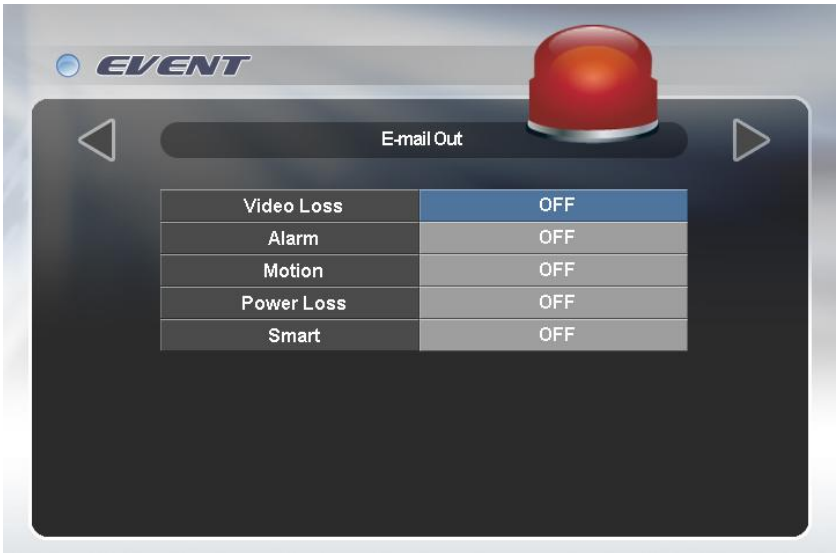
The SMTP (Simple Mail Transfer Protocol) function allows e-mails to be sent over a LAN
The default is SMTP Mode “OFF”.

In order to activate SMTP Mode, choose SMTP Mode either IP or Domain first.
Then, put ID, Password, IP address, and port.
Finally press “SMTP Status Check” to test.
Please see the screen shots that follow:



E-mail Out

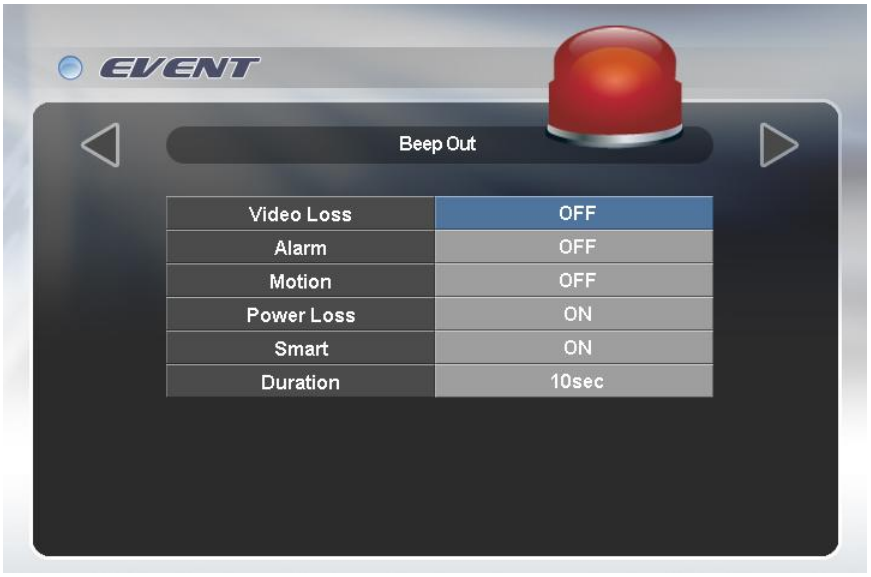
As well as e-mail on event activations the Quantum can be set to send a report on the following occurrences: Video Loss; Alarm; Motion: Power Loss and Smart (Hard disk monitoring). Still images from selected cameras can also be sent with the e-mail



Beep Out

The buzzer can be set to sound on the following occurrences: Video Loss; Alarm input; Motion detection; Power Loss; Smart (Hard disk monitoring).

The duration of the beep can be set.



Alarm Out

The Alarm out relay can be set to activate on the following occurrences: Video Loss; Alarm input; Motion detection; Power Loss; Smart (Hard disk monitoring).

The duration of the activation can be set.

Relay Follower

This allows the full screen images of several DVRs to be viewed on a single monitor.

A relay can be set to close each time a camera is selected.

This relay closure can be used as the Alarm input to a switcher, such as the VS042A. If the Monitor outputs from several EVO's are taken to the inputs of this switcher, then each time a camera is selected, the switcher will change it's output to the relevant DVR monitor picture.

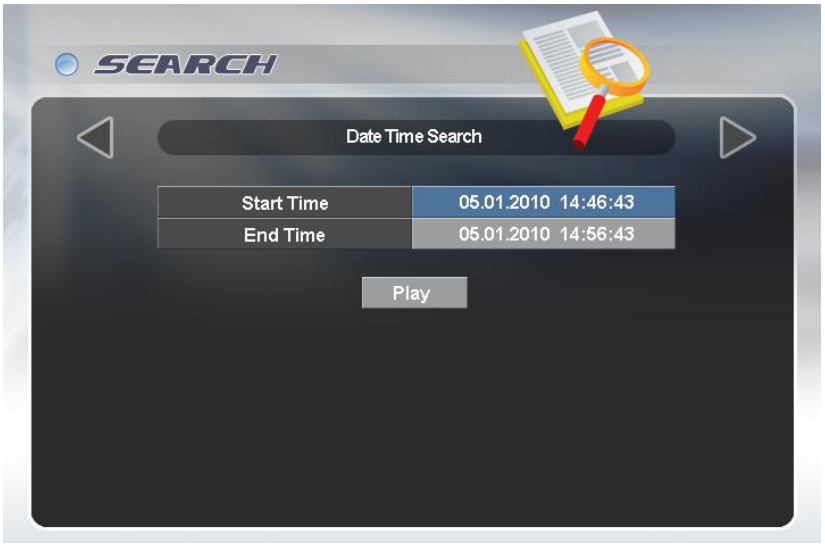
This allows the full screen images of several DVRs to be viewed on a single monitor.

SEARCHING VIDEO FOOTAGE

To access the search option, press the SEARCH button on the front panel or right click the mouse and select Search, (A password may have to be entered) after which the following screen will be displayed.

Date / Time Search

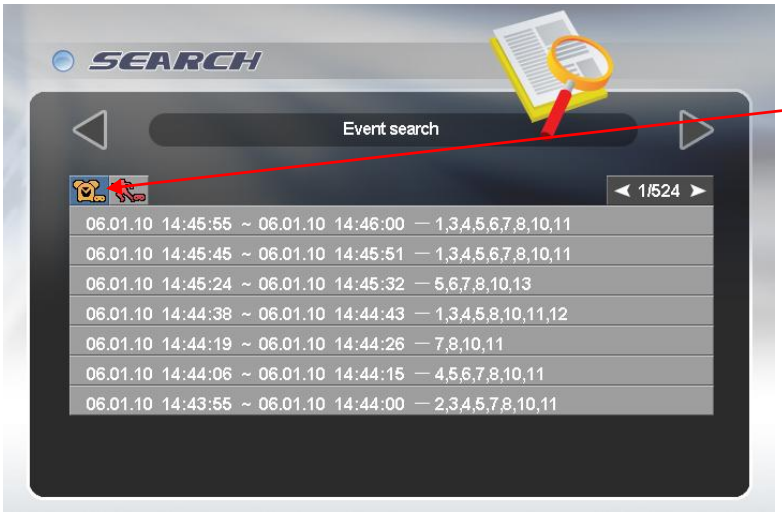
If you select date/time search, the following will be shown. Use the numerical number on the front panel or the mouse to select the time and date required, then select Play.



Event Search

This allows the user to select between ALARM or MOTION events. Select required option by pressing the right arrow, or selecting the icon with the mouse.

ALARM – The search is for any alarm activation within the times defined.
MOTION – The search is for any motion events within the times defined.



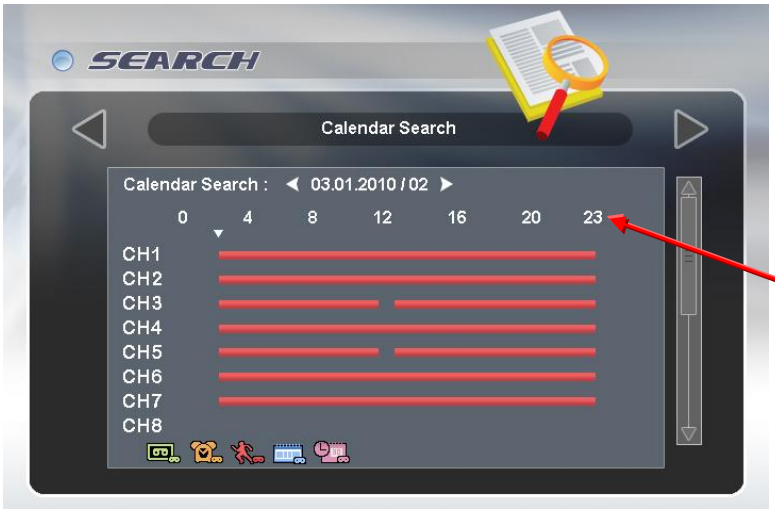
Alarm and Motion icons

Calendar Search

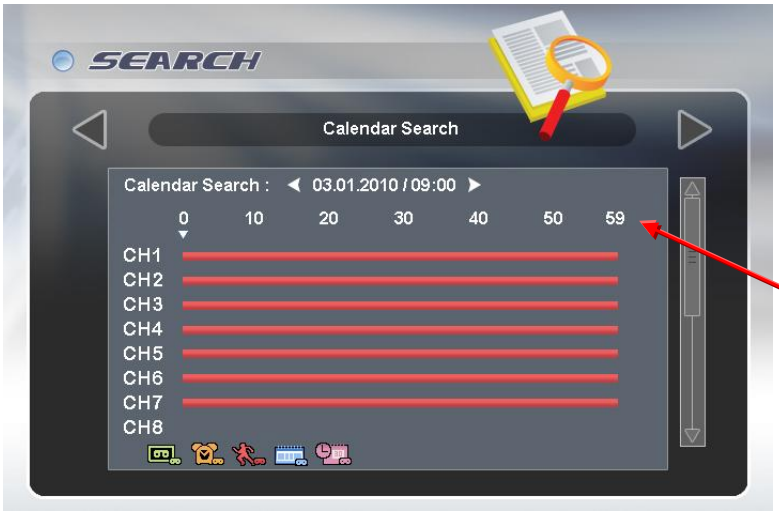
Following screen is displayed when “Calendar” search is selected.

The Calendar search gives a graphical representation of when video is recorded on the hard drive.
The year and month can be selected. This month is shown as a calendar on the screen, any day which contains recorded video will be indicated by a highlighted number in white.
Move to the desired day by using the up / down / left / right buttons, Select the day by pressing SEL.

The following screen will be displayed.



The hours which have recorded data are displayed as a coloured bar. Select the hour which you want to review, the following screen will be displayed.

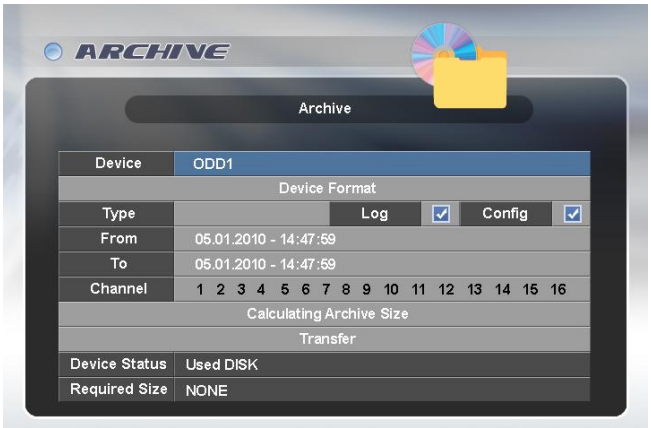


The minutes which have recorded data will be displayed as a coloured bar, click on the time required; the recorded data will be played back from this point.

Archiving Evidence to DVD/CD or USB

Once the required video has been found**,** it may be necessary to down load it for evidential purposes. This can be done either onto the internal CD/DVD-R writer or via the USB port on the front of the Quantum EVO.

To do this press the SEARCH button and using the down button move to ARCHIVE, once highlighted press SEL, the following screen will be displayed. (The DVR will search for a CD/DVD or USB device, if none is present this search will take approx 1 minute)



Device
This allows selection between the internal CD /DVD-R writer and the FLASH option via the USB port, when highlighted use the right arrow to toggle between the options.

Device Format
Format for **CD/DVD-R** is **not** needed. When using **a USB pen**, the format **should** be done first.

Type

EXCLUSIVE file type
If evidence is downloaded as an Exclusive file, the Quantum EVO will download bespoke player software on to the CD / DVD or USB device along with the evidence. This means that no special software is required, by the reviewing PC. This format is secure and watermarked.

AVI File type
If the AVI option is selected then a video from a single camera can be downloaded in a format which can be replayed using Windows Media Player, GOM or VLC players.
Note: Time, Date and camera titles are not exported in the AVI format

LOG
The Log file can be downloaded from this menu screen, simply tick the LOG box and do not select any camera channels, then select transfer.

Config
The Configuration files for the DVR can be downloaded and saved.

From and To
You can set up the start (From) and stop (Stop) time which is required to be backed up to the internal CD/DVD-R or USB device. Highlight this option, then press SEL, then use the alphanumeric buttons or the mouse to set the time and date. Repeat for the end time.

Channel
As long as the EXCLUSIVE file format is selected, the number of channels to be down loaded can be selected. Anything from a single channel to all 16 can be selected.

If AVI is selected only a single camera can be downloaded.

Calculate Archive size
Once the time and date and file format have been entered, it is necessary to confirm that the size of file created will not exceed the size of memory available on the disk or USB device. Move to Calculated Archive size and press SEL.
The Quantum EVO will then calculate storage space required for download file. This will be displayed in the Required Size section. As long as the Required Size is smaller than the Free/ total space, then move to Transfer and select it.

Transfer
When Transfer is highlighted press SEL, the downloading will start. Percentage done during downloading will be shown.

* USB compatibility: the following have been tested

Lexar JumpDrive	128/256MB
SanDisk Mini Cruzer	128MB
SanDisk Cruzer Micro	256MB, 512GB, 1GB
KINGSTONE	2GB
A-DATA	2GB
IMATION	2GB
MARUZEN	1GB
DVD/RW Plextor	PX-716UFL
Lite-On CD/RW	(LTR-52327SX)

Device Status
The device status will indicate if the CD/DVD or USB open is blank and suitable for downloading onto.

Required Size
The size of file selected for downloading will be displayed in this box, once the calculate Archive Size button has been clicked.

LOG

The log file contains information on the following:

Power:	Power on, Power off, Power fail
Record:	Rec fail, Rec start, Rec stop, Rec error, Rec full
Operation:	Play start, Play stop, HDD format, Menu set
Client:	R_Login, R_Logout, R_Logfail, R_Play, R_Transfer, R_Rec on, R_Rec off, R_Upgrade
Event:	Alarm, Motion, Audio, Video loss, Email fail
Archive:	This lists the USER, time/date when Archive was done, and time range of archived section.

A total of 2500 events can be recorded the oldest being overwritten when a new one occurs, they can be viewed all together or as individual types.

Client Viewer software

Each Quantum comes with license free viewer software to view the Quantum across a network.

To be able to do this the recommended minimum specification for the PC is as follows:

Minimum PC specification

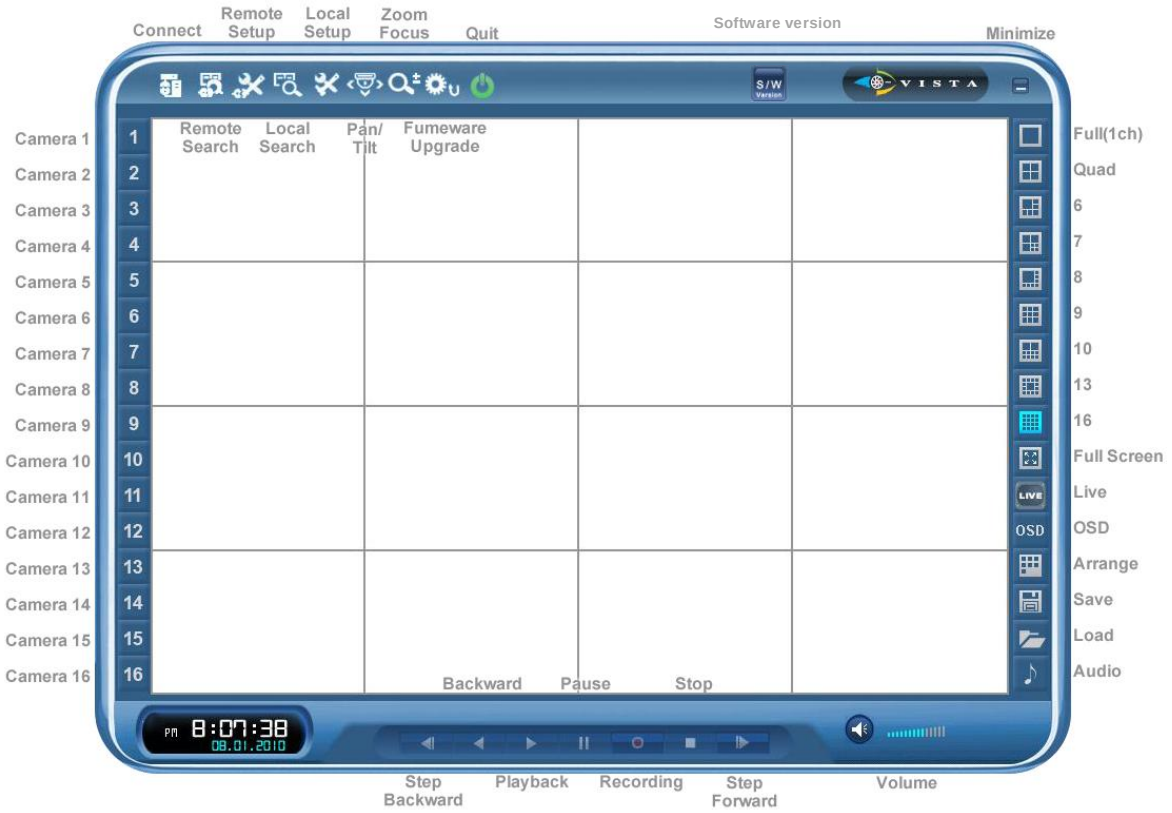
> CPU: Core 2 Duo 1.8GHz,
> Graphic Memory: 256MB

Installing software

When you put Quantum Network installation CD into your PC, it will auto run and lead you through an installation wizard. Follow the instructions. Once the software is loaded it will automatically run.

Connection

To connect to the Unit, open the Viewer Software and click the connection button,



Logging on

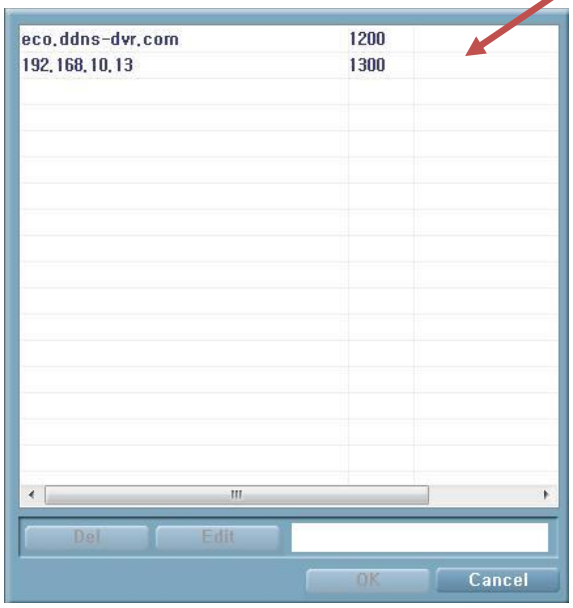
The following window will appear.

To connect to the Quantum, enter the units: IP address; DVR Port (2000 ids default), ID and Password. Then, click “OK”, to start the live monitoring.

Description field is the name of area / Building / location of the DVR, this should be typed in he first time the unit is connected to, this will store it in the address book.

Address book

Click on the Arrow to the left of the IP address, the following box will appear. This lists the last 22 units that have been accessed. To reconnect to one of these units simply double click, then add the ID and Password.



Live Monitoring

The software is best viewed with the PC monitor resolution, set to: 1024 x 768.

Split Screen options (1, 4, 6, 7, 8, 9, 10, 13,16):

Spilt Screens can be viewed during both live and playback. The splits screens available are: full screen,4,6,7, 8,9,10,13 and 16 way.

1) Full Screen

2) 10 Way

Full Screen on/ off

When the full screen button is selected, a tool bar offering the various split screen options, and the Exit key will be displayed at the bottom of the screen.

OSD on/off:

The OSD button will toggle between the on screen titles etc being shown or hidden. This toggles between various OSD display options.

(SMART)ARRANGE ON/OFF:

If Cameras are being displayed in segments that are not logical, the Smart button will rearrange and put camera input 1 into segment 1 (Top Left) etc.

Image Save / Load:

SAVE: This icon is used to save a still image in either JPEG or BMP or TIF format. There is no change on the main screen when the “Save” icon is pressed.

The still image is stored as default in C: Vista: Saved folder, as a Jpeg image using the date and time as the file name.

LOAD: This icon is used to retrieve and view a saved still image, when selected a list of available images will be shown. Select to one required, it will be displayed along with data information (Status-Live/Playback, IP address, CH No.)

Playback (Step Backward, Backward, Playback, Pause, Recording, Stop, Step Forward)

Audio (Mute, Volume)

Remote search

Search (Date/Time/Event/Calendar), Archive (Remote Archive), Log (Remote Log) are available.

SEARCH

This Remote Search is able to play back video on the PC direct from the hard disk storage on the Quantum EVO. There are 3 options for as follows.

1) Date/Time
2) Event
3) Calendar

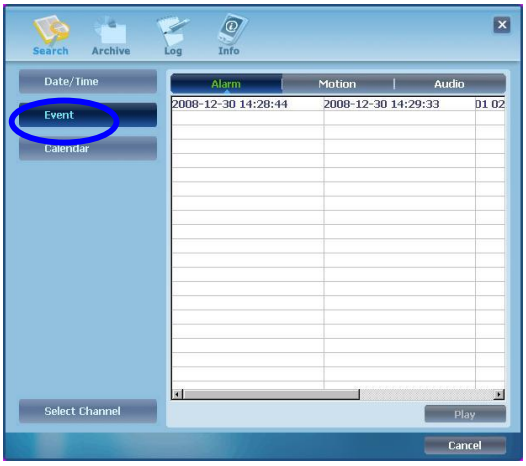
Date/Time

When the cursor is placed over a part of the time and date a drop down arrow will appear, use this to set the required value.
When set.

Click “Play” button, this window disappears and Remote Playback will start.

To stop playing back press Stop the search screen will appear to allow another search to be carried out, if not required, click cancel followed by live .

Event



Click on the Event button on the right hand side, the software will search for all event types. This may take a short while.

A list of the available events will appear.
To play an Event select it and click Play.

To stop playing back press Stop the search screen will appear to allow another search to be carried out, if not required, click cancel followed by live .

Calendar

Select the date required (as long as the date is highlighted in Blue there is recorded data on from that day).

Select the Month then Day required (Days with recorded video are highlighted in Blue)

One the day is selected the following display will be shown:

Click and drag over a required time period, this will zoom in on this selected segment of the time line.

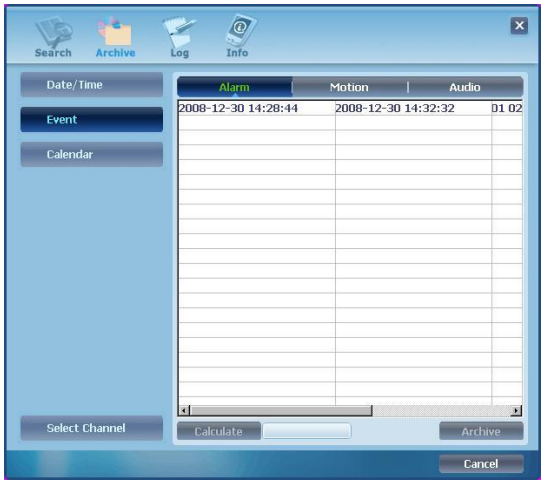
When zoomed into a section that shows a few minutes then the mouse wheel can be used for more accurate time searching.

ARCHIVE
Date/Time

Enter the Start and End dates and times, by hovering over the selections, a drop down box will appear.

Once selection is made, then “click” calculate, the file size will be displayed. Finally click “Archive”, the file will be transferred to C:\Vista\Download.

Event



Select either: Alarm, Motion or Audio from the top of the screen. A list of events will appear.

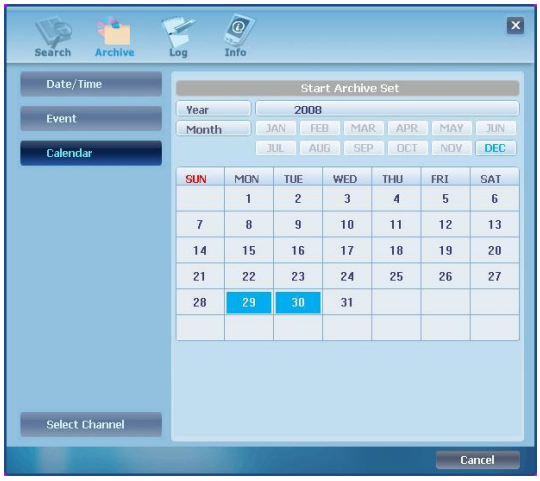
Click on the event required, it will be come highlighted.

Click on Calculate, the file size will be calculated, this may take a few seconds.

Finally click Archive; the file will be transferred to C:\QTplayer\Download.

Calendar

Select the date required (Days with recorded video a data present are highlighted in **Blue**)



Select the Month then Day required (Days with recorded video are highlighted in Blue)

One the day is selected the following display will be shown:

Select the Start Time tick box

Click and drag over a required time period, this will zoom in on this selected segment of the time line.

When zoomed into a section that shows a few minutes then the mouse wheel can be used for more accurate time searching.

Next select the End Time Tick Box, and use the same method to select this time.

The backup procedure is same as Date/Time & Event backup as previous page.

* “Prev” to go back to previous stage.

*The downloaded data is saved in the follows location:

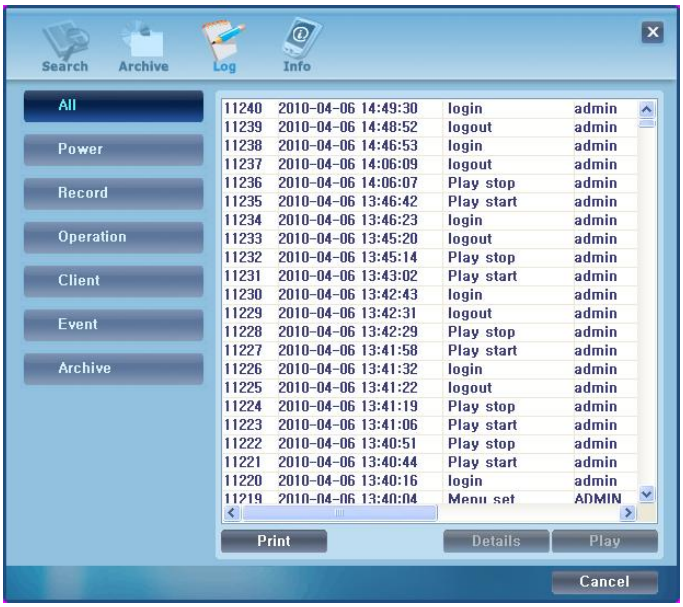
C:\Vista\Download.

Play back down loaded files

Open the viewer software but do not connect to a unit, click the cancel button to remove the log on box.

Next click on the Local search button the normal search box will appear, use the same method to search the files on the PC and Play back.

Remote Log



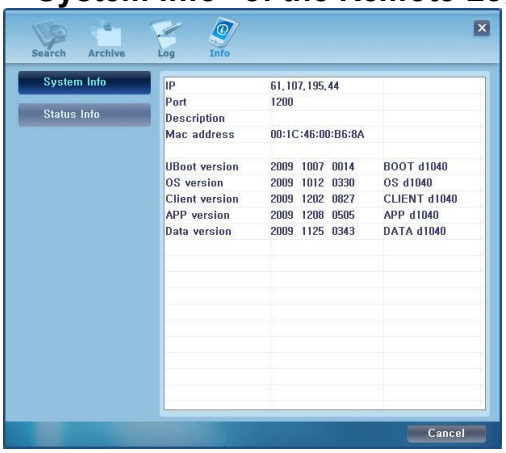
The Log file can either be viewed or printed. The recorded Event can be played, by selecting it and clicking on Play.

The log list can be viewed as a whole or filtered by the following types:

Power:	Power on, Power off,
Record:	Rec fail, Rec start, Rec stop, Rec error, Rec full
Operation:	Play start, Play stop, HDD format, Menu set
Client:	R_Login, R_Logout, R_Logfail, R_Play, R_Transfer, R_Rec on, R_Rec off, R_Upgrade
Event:	Alarm, Motion, Audio, Video loss, Email fail.

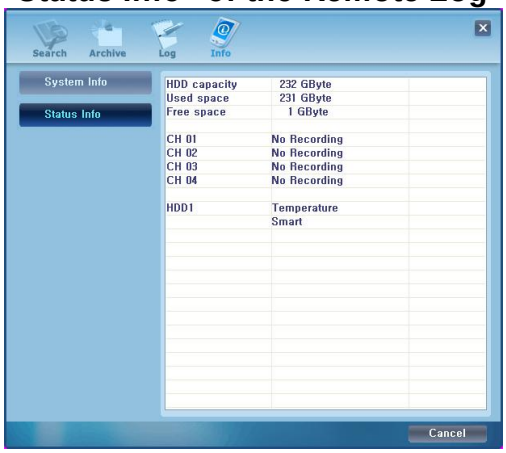
Info

- “System Info” of the Remote Log



The system info displays the Mac address and software version information.

- “Status Info” of the Remote Log

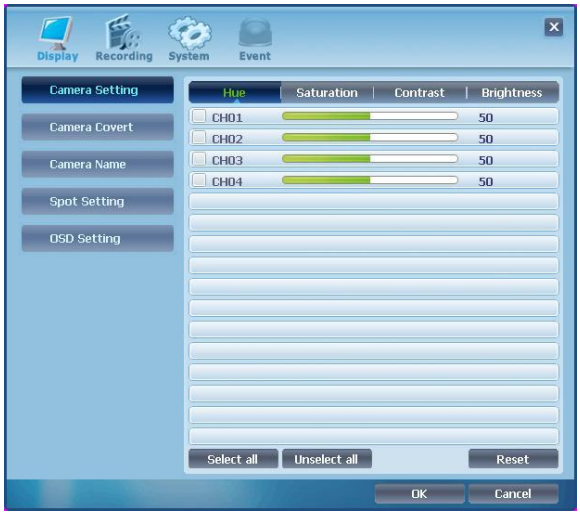


This shows the status of both the Hard disk and the recording modes of each channel.

Remote Setup: (Menu settings - Same as DVR)

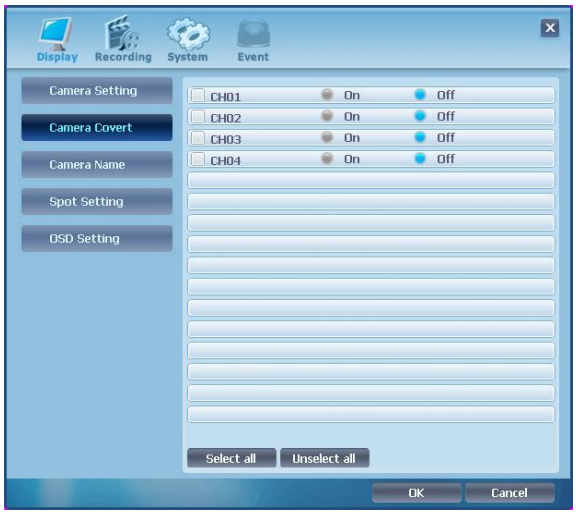
Display

– Camera Setting



Within this setting the Hue, Saturation, Contrast and Brightness can be adjusted on a camera by camera basis.

– Camera Covert

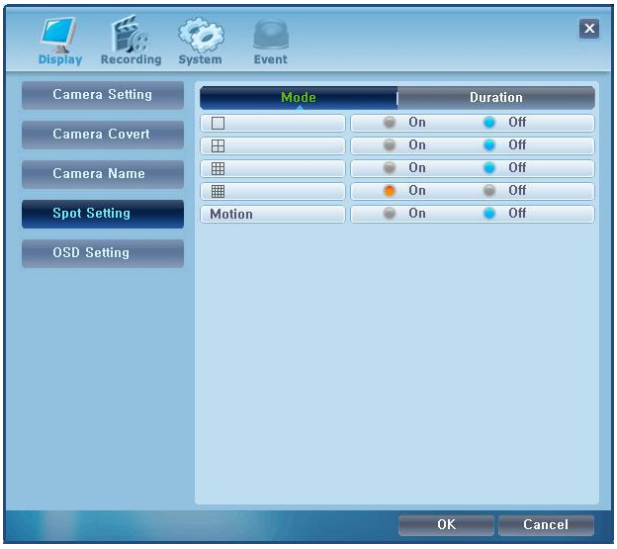


Cameras can be remotely set into Covert Mode, they are still being recorded but cannot be viewed local to the system, or by any remote user apart from the Administrator on line.

- Camera Name

Up to 32 Characters are available for each camera name.

- Spot Monitor settings



1) Set “Mode” (Split screen/ Alarm Motion or Event), by click the ON button for the required state – It will turn red.
2) Next select Duration for a sequence using the white time bar, next click OK.

OSD On/Off

The Symbols and text displayed on screen can be controlled:

1. The status bar can be set to be off/ Always on or be on for 5 or 10 seconds after a key press.
2. The Event symbols such as Motion, Audio, Pan / Tilt can be displayed or turned off.
3. The camera name can be displayed or turned off.
4. The PTZ display can be made to time out
5. The Password entry box can be made to time out
6. The darkness of the status bar can be varied.

Camera Info

If channels are set to Disconnected, then:

1. No OSD info will be displayed in associated screen spilt segments.

2. Cameras cannot be allocated recording rates within the record set up

3. Camera inputs will not be included in sequences.

Recording

Global

1. HDD Overwrite – Sets the HDD to either overwrite or stop when full
2. Post Event Duration – Sets the period of time after which an event ends that the DVR carries on recording in the Event mode settings
3. Quality – This set the quality level to either Low, Med of High
4. Event Mode – This is can be set to Exclusive to only record cameras in Events states, or Normal where the Event camera are recorded at the Event rates and other cameras ae recorded at the rate set below in th Non-Event FPS
5. Non-Event FPS – This is the record rate and quality setting that camera that are not in Event mode will be recorded at

Privacy regions

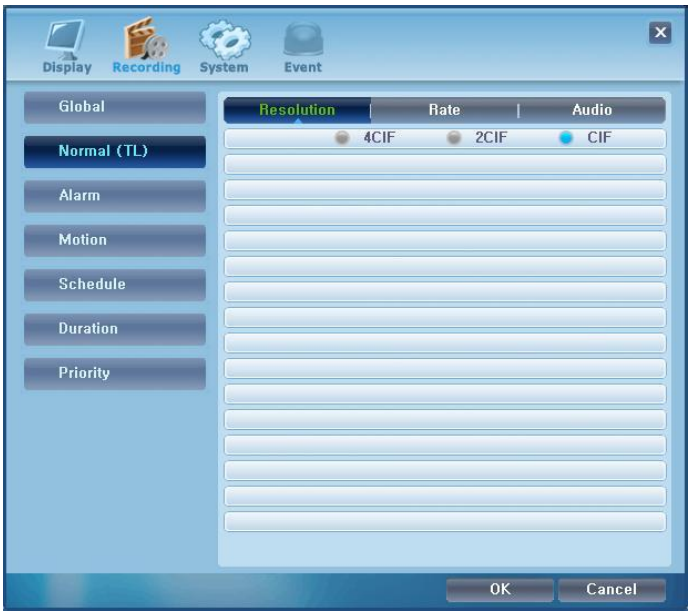
Click on the Privacy Regions button to access the set up of individual privacy regions on each camera view

Audio Configuration

Click on the Audio Configuration button to access the set up which cameras inputs are associated with which Audio inputs.

Normal

Resolution



The resolution at which cameras are recorded is global for the Normal setting.

Rate

Each camera can have its individual record rate adjusted.

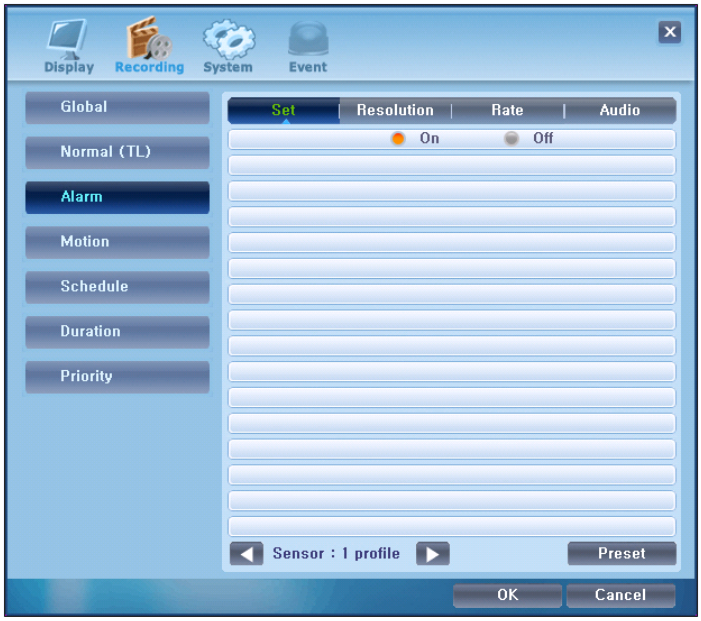
The amount of frames available for recording is dependant on the Resolution setting.

CIF = 100 FPS total
2CIF = 50 FPS total
D1 = 25 FPS total

Audio

The audio recording can be individually turned on or off against specific cameras.

Alarm



Each of the four Alarm inputs can be activated and given there own alarm recording profile.

Select each input profile by using the left and right arrows at the bottom of the screen.

Enable each profile by selecting the ON button.

Set the Resolution, Record Rate and Audio recording as explained in the “Normal” recording section.

Each of the four alarm inputs can be used to send up to 4 PTZ cameras to alarm positions. Select the Preset button at the bottom right on the screen.

.

Motion

The Motion settings for Resolution, Rate and Audio are configured in the same manner as Normal (Time lapse) see pages 76 and 77.

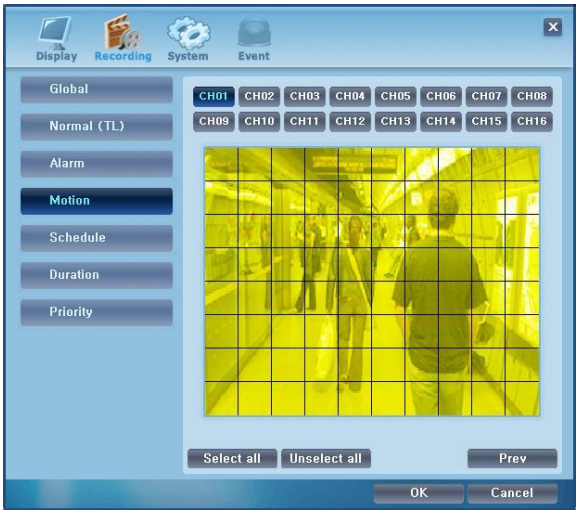
The only additions are the setting up of Sensitivity and the motion detection grid per camera.

Motion Sensitivity

The sensitivity of motion detection can be set on a per camera basis, the sensitivity will have to be adjusted to suit the individual scenes and may require several adjustments to achieve optimum performance.

The detection region setup screen is displayed by clicking the Region button.

Region



Each cameras motion detection grid can be individually tailored for the camera scene. They are set to a default of all on (Yellow).

They can all be turned off by clicking “Unselect all”. Then individually selecting the required boxes or clicking and dragging over an area.

Once set click OK.

Schedule

The Schedule settings for Resolution, Rate and Audio are configured in the same manner as Normal (Time lapse) see pages 76 and 77.

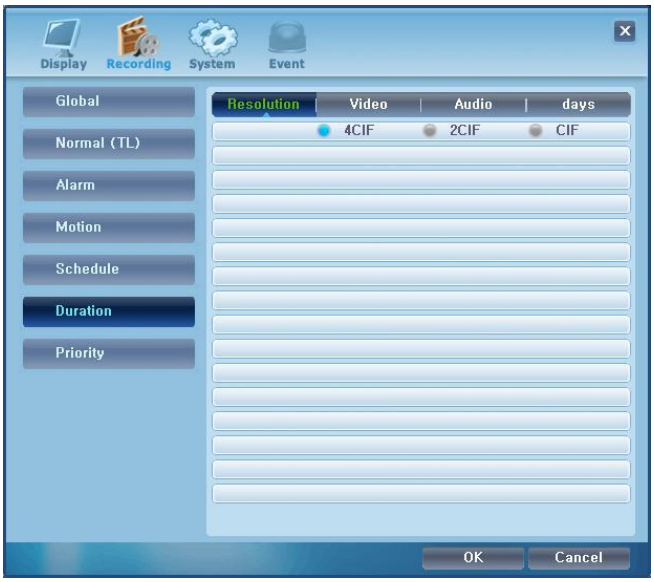
The only addition is the setting up of Schedule grid, click on the SET button to display the following screen..

A timetable can be set in hourly blocks throughout the whole week.

Duration

The duration setting allows the user to choose the Resolution and length of time the unit records for, then the DVR will automatically adjust the rate at which it records to achieve this time period.

-Resolution

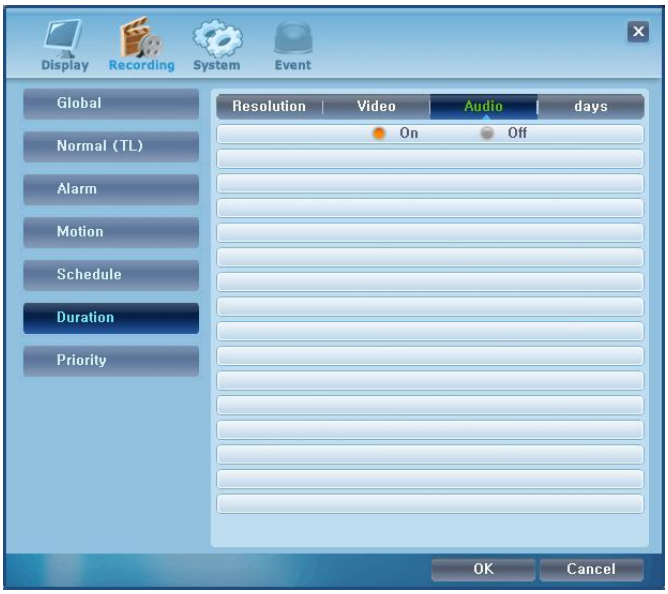


First select the resolution required for each camera.

-Video

Next select whether the camera is connected to the DVR.

-Audio



Next select if Audio is being recorded and which channels to associate them with.

-Days

Finally select the number of days the DVR should record for. The choice is between; 5, 10,20,30,40,50,60,70 80 or 90 Days.

Priority

The RECORD PRIORITY allows the mixing of the various record methods to customise the individual site requirements.

Example: A site may require Alarm recording at night, then a standard FPS recording during the day. In this case the Schedule would be set for required FPS and resolution, and the timetable set for this recording between 8am and 8pm each day. Schedule would be set as 1st Priority. The Alarm settings would be configured as required and this would be set as the 2nd priority.

The Quantum EVO H.264 would then record between 8am and 8pm at the Scheduled rate, then once beyond 8pm would look to the second priority and only record Alarm Events.

System

Basic

This section is used to select:

Language
Date format
Video type
System ID

Deinterlace
This option takes out the judder associated with movement in 4CIF (D1) recording. Set camera channel to ON

Account

The Quantum EVO H.264 allows for :
1 Administrator level log on
1 Manger level log on
4 User level log on

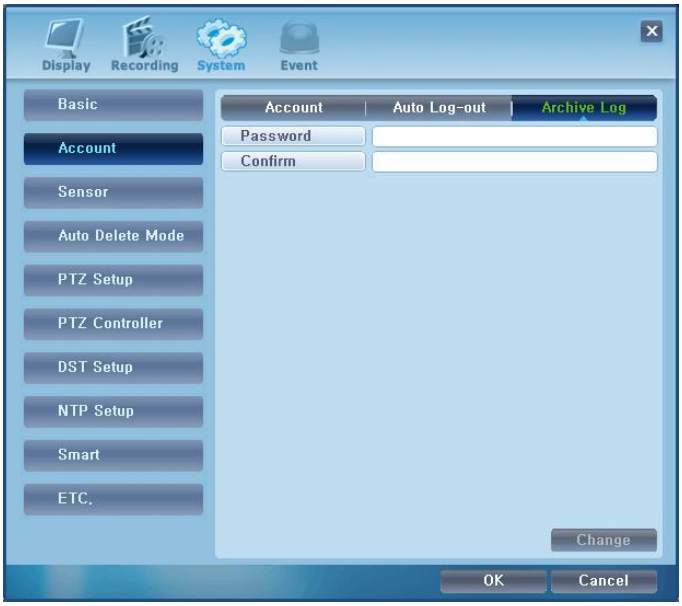
Each of the 6 log-on accounts can be given individual passwords and user rights

To amend the Name and password, click on the name beside the Client Account box. This will display the name in the ID box and it can be edited and passwords changed and confirmed.

User rights can be applied.

Auto Log out

After a certain amount of time (15mins, 30mins or 1 hour) of inactivity. The users can be automatically logged off both the Local front panel control, and the Client viewer,



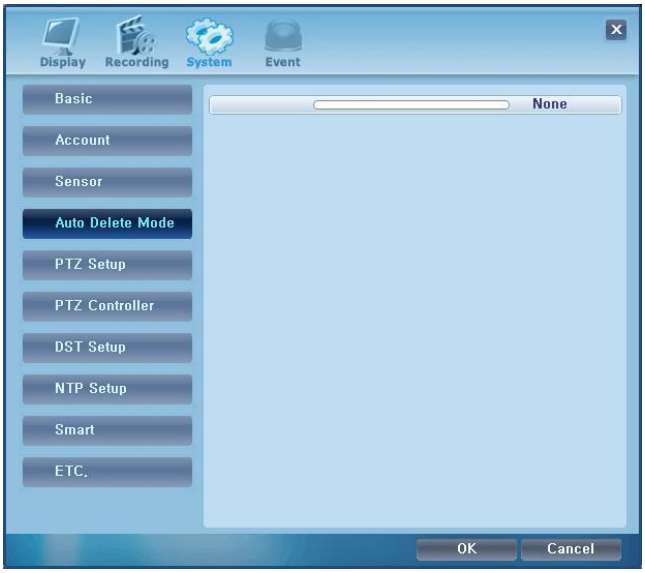
Archive Log password

A password is required in order to access the Archive Log,

Sensor

The alarm inputs can be configured to be either inactive (NONE), or Normally Open (N.O), or Normally Closed (N.C).

Auto Delete Mode



In Auto Delete Mode the DVR can be set to delete recordings that are a certain numbers of days old.

This allows the DVR to comply with data protection laws in certain countries such as France.

PTZ Setup for Cameras

-ID

Each camera input can be allocated an RS485 ID between 1 and 255.

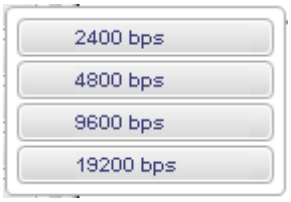
-Protocol

Each camera output can have an individual protocol associated with it, the choices are:

Vista PD
Pelco D
Pelco P
LG
Samsung
Vista C (FSK)

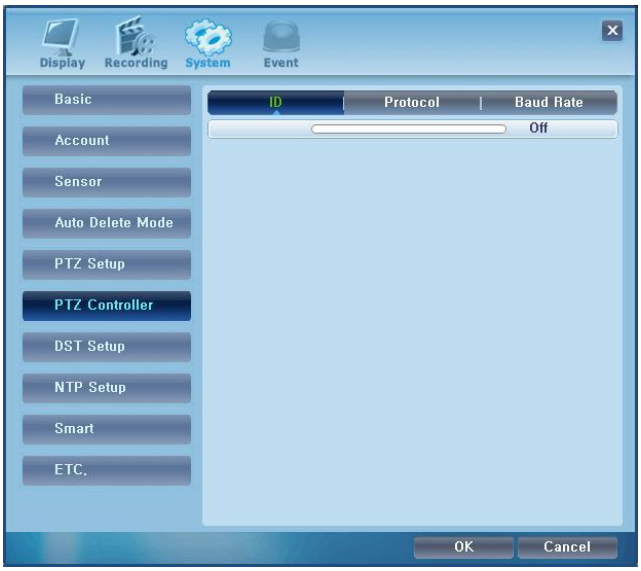
-Baud Rate

The Baud rate of each PTZ camera can be set the choices are:



PTZ set up for Keyboard

-ID



The DVR can be allocated an RS485 ID between 1 and 255.

Note: The DVR RS485 address must be different to that of the keyboards connected to it.

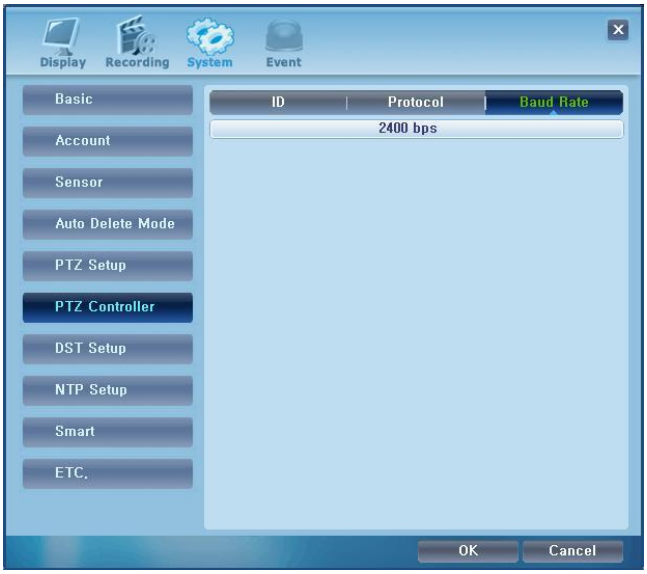
Vista VKBD4 keyboard address is set via the keyboard's engineering mode,
please refer to the keyboard manual.

Protocol

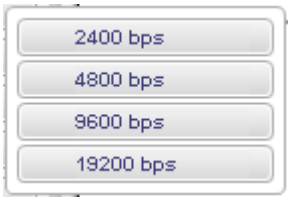
Each keyboard can have an RS485 protocol associated with it, for the Vista VKBD4, VKBD3 or NPX keyboards select:

Vista-KBD

-Baud rate



The Baud rate of each PTZ camera can be set the choices are:

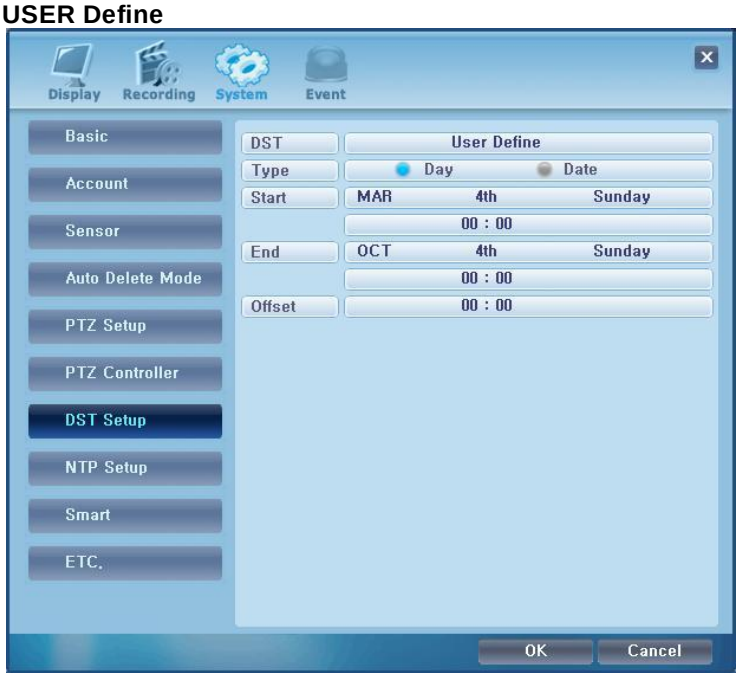


Choose 9600 for the VKBD4 and VKDB3im

DST Setup (Daylight Saving Time)

The Quantum EVO H.264 can be set to automatically reset its clock when the clocks change for Day Light Saving time. As default this is set to Off.

USER Define



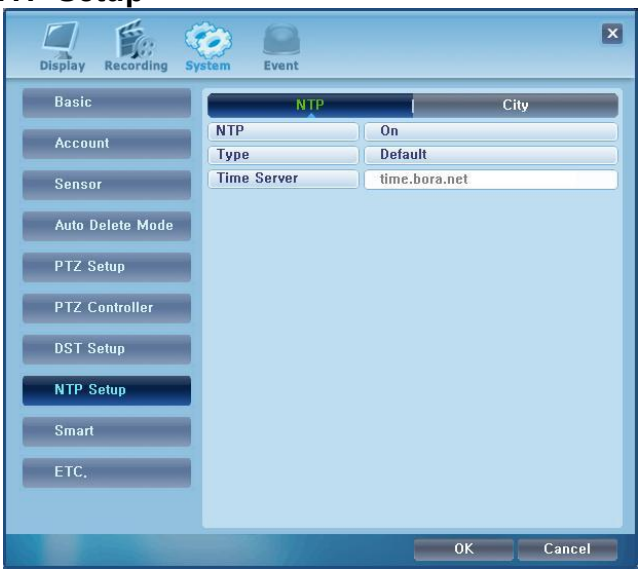
Change “Off” to User Define, this will allow the exact date and time for the change to occur. Alternatively

Select Region

Select the required country.

Then click “Ok”.

NTP Setup



NTP setup allows the DVR to have its internal clock synchronised with an External clock.

The default setting is “Off”

To set up hover on the “Off” a drop down arrow will appear giving the option to turn “On”.

Once “On”, two other options will appear:

Type allows selection between:

Default – Time server is “time.bora.net”.

Domain – Where another time server name can be added.

IP – Where an IP address for a time server can be input.

Select City

Once the NTP settings have been set, you must then tell the DVR which time zone you are in. This will allow it to offset any time differences if the time server you contact is in a different zone.

Select City, the map screen will appear. Hover over the city selection box, a drop down arrow will appear, click on the arrow. A list of time zones will be displayed. Select the time zone where the Quantum is located.

Then click OK.

Smart (HDD Watch Dog)

The Smart function allows the health of the Hard disk Drives to be monitored for bad sectors and high temperatures.

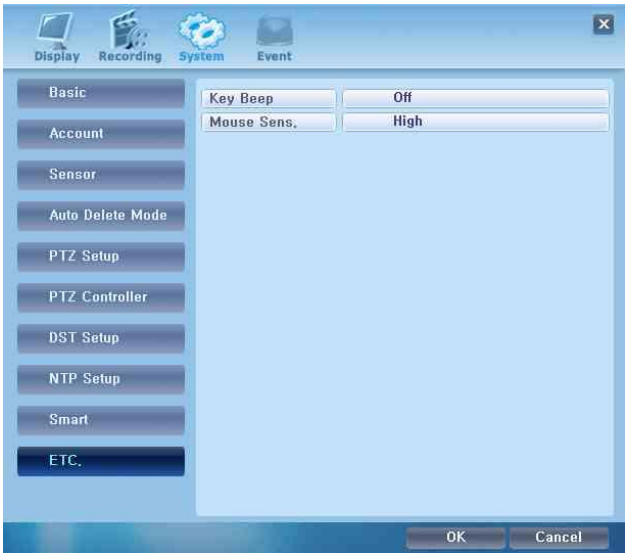
Note: Over time all Hard drives will develop bad sectors, this does not mean they have failed, it is an indication that they are beginning to fail, this can be used as a preventative maintenance tool, so drives can be swapped out before failing completely, so preventing the loss of recorded images.

Smart can be turned on or off to monitor the Disk sectors

The temperature can be set to a value, above which it will alarm. The Quantum EVO H.264 is rated to work up to +50 degrees C. It is recommended to det the Temp to approx +45 degrees. This will give the opportunity to take preventative action, such as improving ventilation to the unit.

Message can be turned On or Off, if On a message will appear on the screen to warn of potential problems.

ETC



1. Key Beep – This can be turned on or off
2. Mouse sensitivity – This can be set to Low, med or high, to match the users dexterity

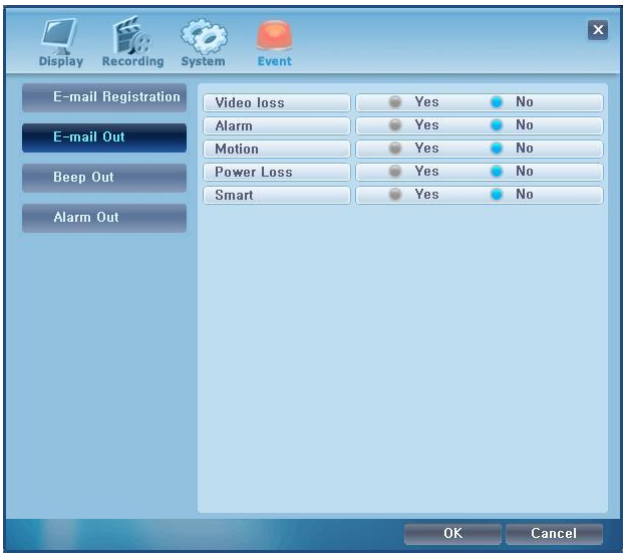
Event

Email Registration

The Quantum EVO H.264 will send E-mails to up to 3 defined addresses under certain conditions such as Alarms or video loss. The screen is where you setup the receiving address and address that the DVR will send from.

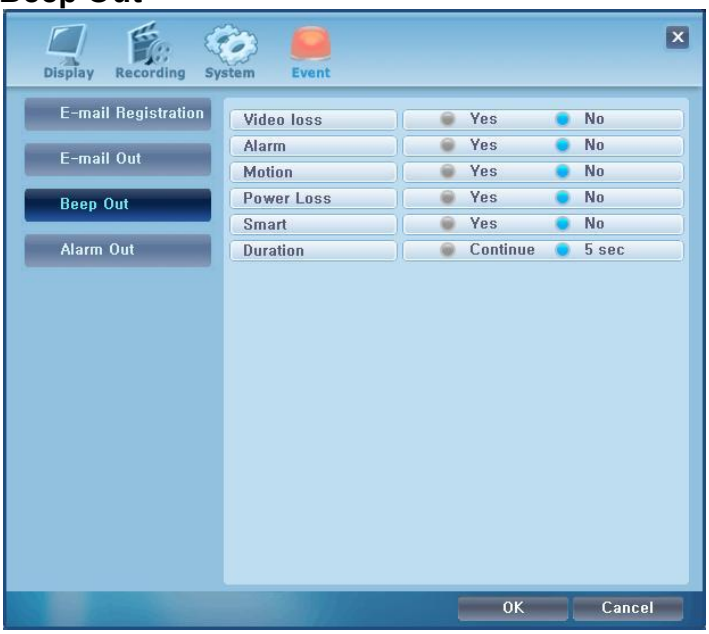
The mails can be set to be sent immediately an event occurs, Daily or Weekly.

Email Out



The actions which cause an e-mail response can be defined within this screen.

Beep Out



The internal buzzer can be set to sound on the following occurrences:

Video Loss
Alarm activation
Motion Detection
Power loss
Smart

Duration – This sets the length of time for which the buzzers sounds.

Alarm Out

The Alarm output relay can be set to activate on the following occurrences:

Video Loss
Alarm activation
Motion Detection
Power loss
Smart
Duration – Set the length that the relay is active.

Relay follower: If set to YES the relay closes when a camera is selected. This output can trigger an alarmed switcher to switch the video output to the input relating to that DVR, This allows a single monitor to be used to view multiple DVRs. (One at a time)

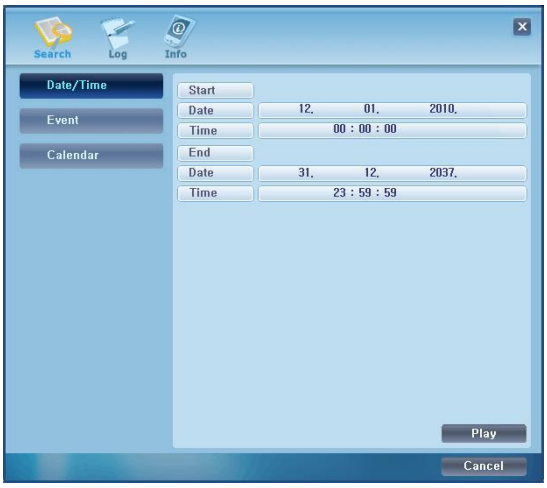
Local Search (viewing downloaded footage)

This allows playback of video which has been downloaded top the PC.

Search

Searches can be done by Date/Time, Even and Calendar.

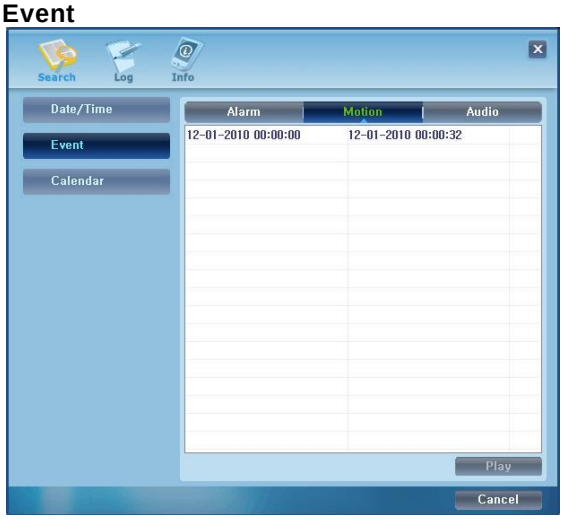
Date/Time



Hovering over the Date and Time bars will allow drop down boxes to select the required time and Date.

Once set, click Play.

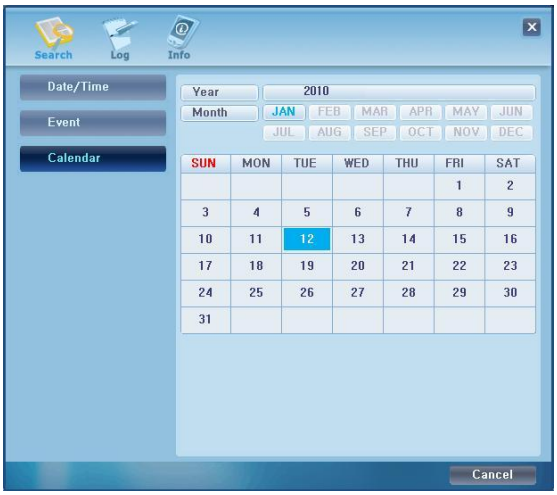
Event



Choose the Event search box then choose the type of Event you are searching for, options are: Alarms, Motion or Audio.

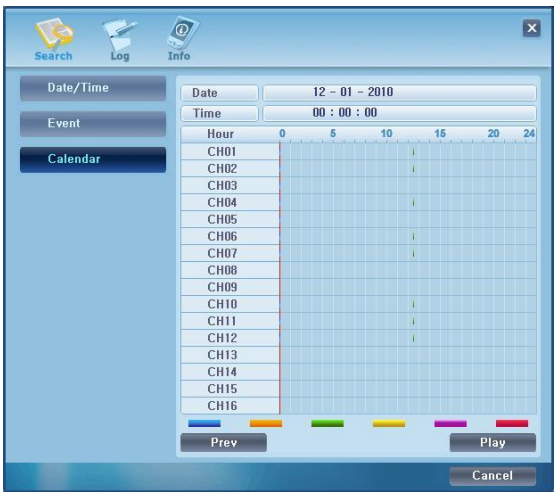
Once the selection is made, a list will appear, showing the start and stop time and date of the event. Choose the Event required and click Play.

Calendar



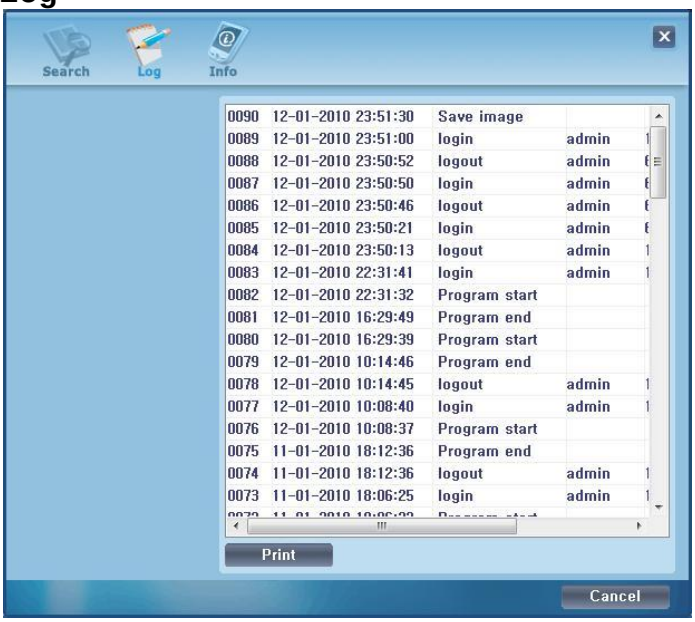
When the Calendar option is chosen this screen will appear, any day with recording available will be highlighted in Blue.

Select the required day.



Any downloaded events will be shown, click on the event, the red line will move to that event. Then click Play to review the recording.

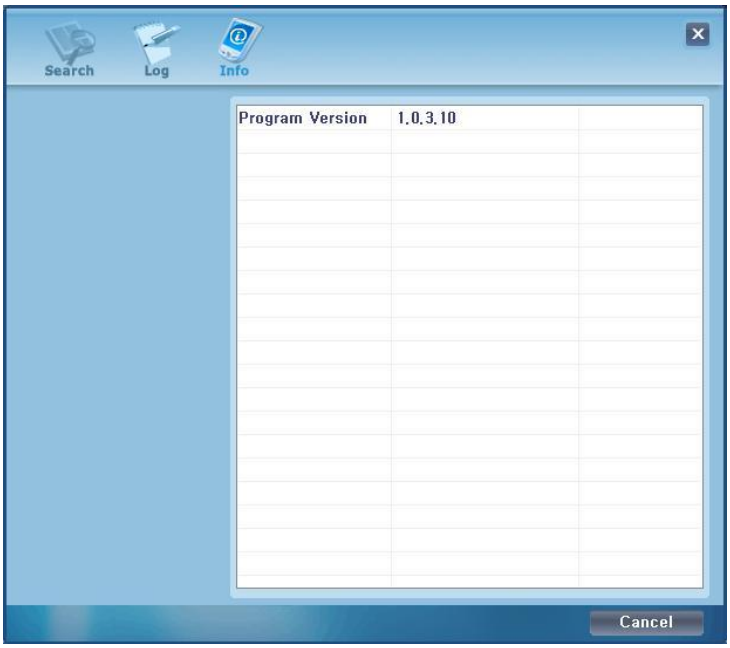
Log



Clicking on Log will display the log file from the unit.

This file can be printed, by clicking Print.

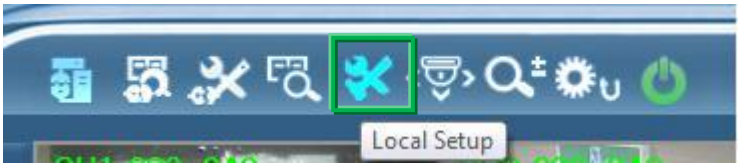
Info



Click on Info. This will display the version of the software client being used.

Local Setup

This allows the setup of the viewing of the software on the PC.



Global

This screen allows the following:

Draw mode to be set to YUV or RGB

Date Format to be set to: DD/MM/YYY, MM/DD/YYYY or YYYY/MM/DD.

Save Format, for the saving of stills as either JPEG, Bit Map or TIF.

Setting the clock to 12 or 24 hour display

Turning the Watermark On or OFF recommended to leave ON

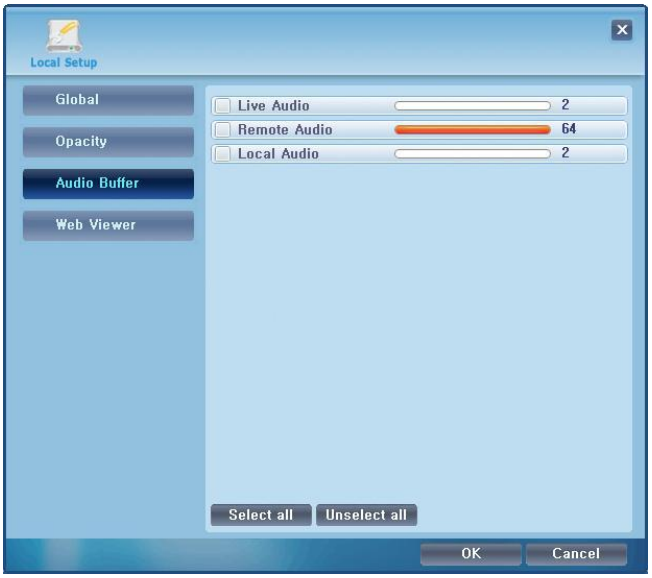
The location of where stills afre saved.

Opacity

The opacity or “boldness” of the OSD can be individually set per function. The lower the number the more see through the box.

?

Audio Buffer



Audio Buffer settings are there to adjust the audio over the network, this will compensate for different network speeds (LANs, WANs etc).

This can only be adjusted if the LIVE video is switched off.

Adjust each variable to achieve best quality video for Network bandwidth available, this is best done through trial and error.

Deinterlace

The Deinterlacing function should be switched to ON for cameras recorded in D1 resolution, this removes the picture judder seen when viewing still images of D1 recordings.

PAN, TILT, Zoom, Focus (Remote telemetry control)

When PTZ button is being pressed, PTZ control icon will be pop-up on the live image.

PAN/TILT/ZOOM/FOCUS

When PAN/TILT button is clicked the Pan/Tilt control appears, this allows Left, Right, Up and Down Control of PTZ cameras

When Zoom/Focus button is clicked, the control changes to Zoom in on the up arrow, Zoom out on the down arrow. Focus near on the left button and focus far on the right arrow.

PRESET/LEARN

PRESET&LEARN icon

The presets button can be activated by clicking on the centre of the control icon, the preset symbol will appear and the Preset selection box will appear.

To save a preset, move the camera to the desired position then click “Set” followed by the desired number.

To recall the preset, click “Call” followed by the desired number.

Firmware Upgrade

User can select Firmware Upgrade menu, if a new version of firmaware exits in the C:/Vista/Upgrade folder ,then the message 'New program found!' will be displayed if there is no file then 'New program not found!' message will be displayed.

To proceed with upgrading press the OK button and select each firmware files to upgrade it to the system, by ticking the boxes.

Once the upgrade has been completed the following message will appear.

Next press the OK button to reboot the DVR, the firmware will only be applied completely once the system is rebooted.

Quit (Exiting Client program)

To exit the Client viewer program click the Quit button.

APPENDIX 1

ALARM SENSOR INSTALLATION

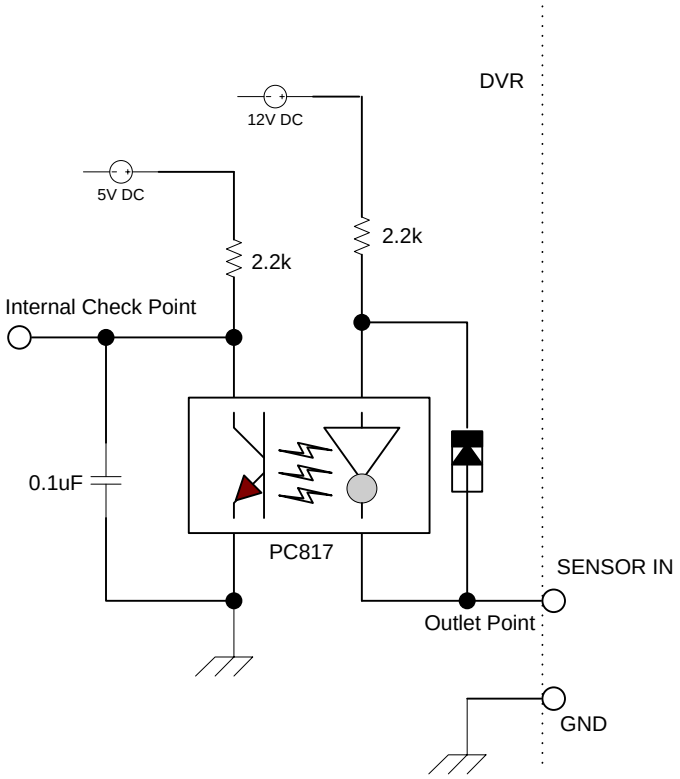
1. Components

1) External Sensor: 1

2) DVR System: 1

2. Inner Circuit for Sensor Input

The inner circuit of Quantum DVR is as follows,



① PC817 : Photo Coupler

② The Specification of PC817

■ Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Input	Forward current	IF	50	mA
	*1Peak forward current	I FM	1	A
	Reverse voltage	V R	6	V
	Power dissipation	P	70	mW
Output	Collector-emitter voltage	V CEO	35	V
	Emitter-collector voltage	V ECO	6	V
	Collector current	IC	50	mA
	Collector power dissipation	P C	150	mW
Total power dissipation		P tot	200	mW
*2Isolation voltage		V iso	5 000	V rms
Operating temperature		T opr	-30 to + 100	°C
Storage temperature		T stg	-55 to + 125	°C
*3Soldering temperature		T sol	260	°C

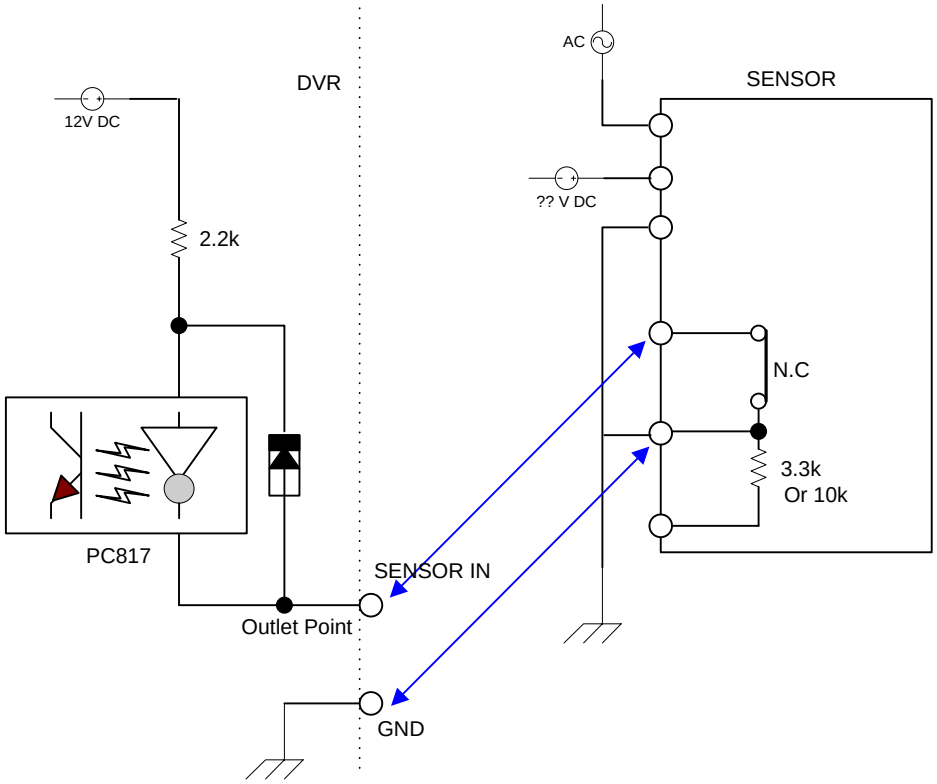
*1 Pulse width<=100□s, Duty ratio : 0.001
*2 40 to 60% RH, AC for 1 minute
*3 For 10 seconds

■ Electro-optical Characteristics

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		V F	IF = 20mA	-	1.2	1.4	V
	Peak forward voltage		V FM	IFM = 0.5A	-	-	3.0	V
	Reverse current		IR	V R =4V	-	-	10	μ A
	Terminal capacitance		Ct	V = 0, f = 1kHz	-	30	250	pF
Output	Collector dark current		ICEO	V CE = 20V	-	-	10 -7	A
Transfer charac-teristics	*4Current transfer ratio		CTR	IF = 5mA, V CE = 5V	50	-	600	%
	Collector-emitter saturation voltage		V CE(sat)	IF = 20mA, I C = 1mA	-	0.1	0.2	V
	Isolation resistance		R ISO	DC500V, 40 to 60% RH	5 x 1010	1011	-	Ω
	Floating capacitance		Cf	V = 0, f = 1MHz	-	0.6	1.0	pF
	Cut-off frequency		fc	V CE = 5V, I C = 2mA, R L = 100 W, -3dB	-	80	-	kHz
	Response time	Rise time	t r	V CE = 2V, I C = 2mA, R L = 100 Ω	-	4	18	μ s
		Fall time	tf		-	3	18	μ s

1. SENSOR Install Processing

① Please refer the below block diagram.

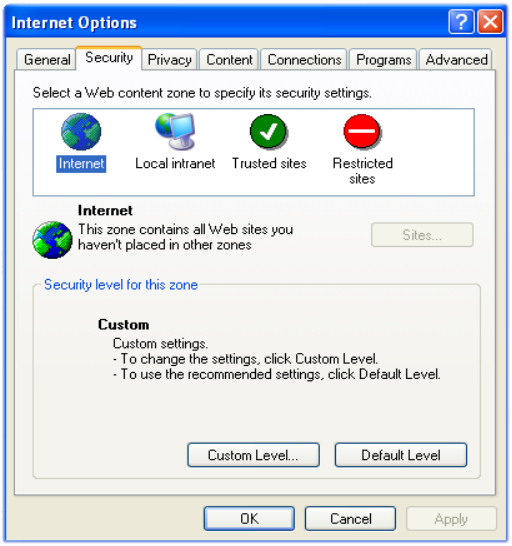


APPENDIX 2

SETTING INTERNET SECURITY SETUP FOR WEB CLIENT ON WINDOW XP/2000 & WINDOW VISTA SERVICE PACK 2.

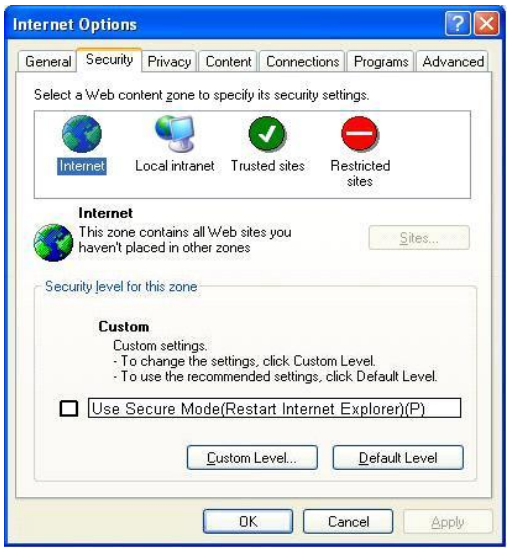
1) Security Setup

> Window XP / 2000

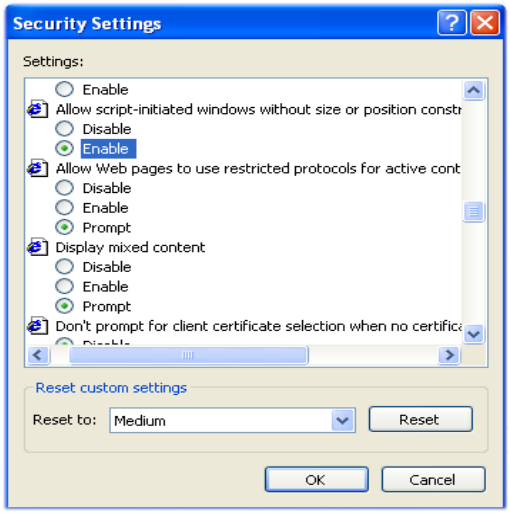


Tools-> Internet Options-> Security -> Select “Customer Level”

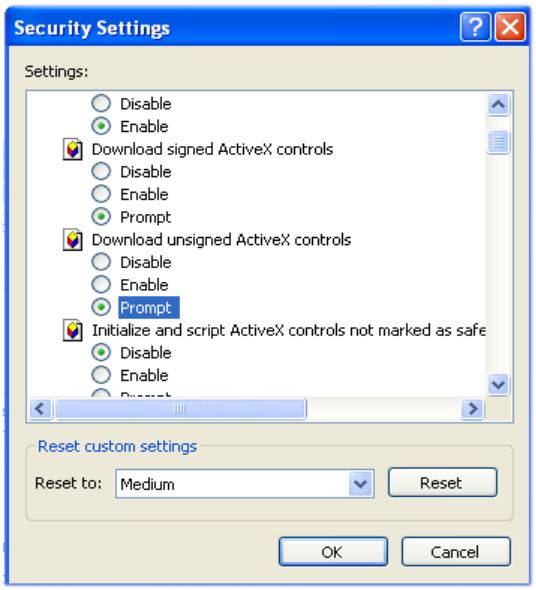
> Window Vista



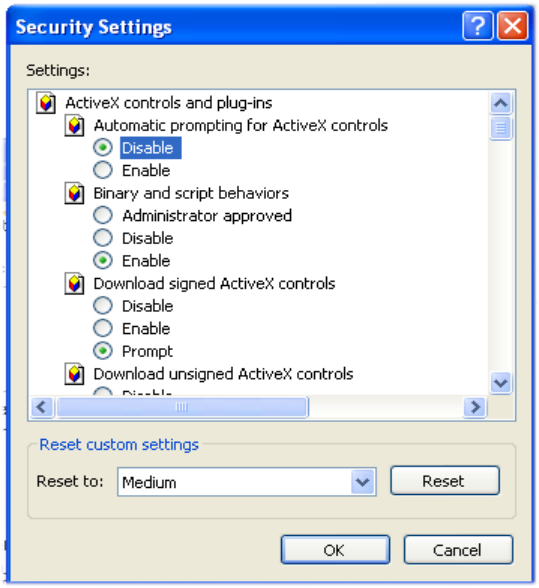
Tools-> Internet Options-> Security -> Unselect square box -> Select “Customer Level”



Select “ Allow script-initiated windows Without Size or position constraints”-> Enable.

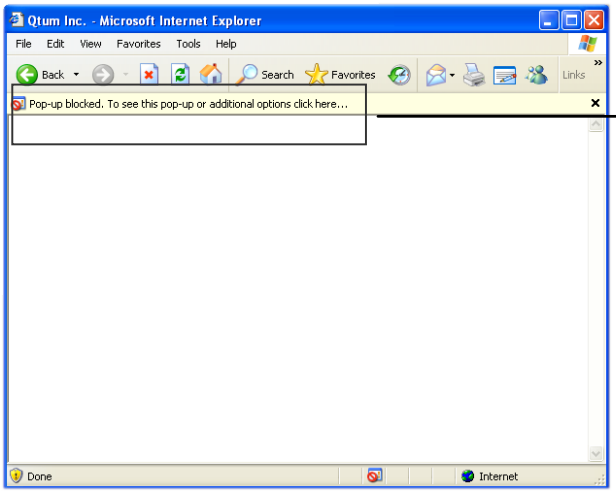


Select “Download unsigned Active X Controls”-> Prompt

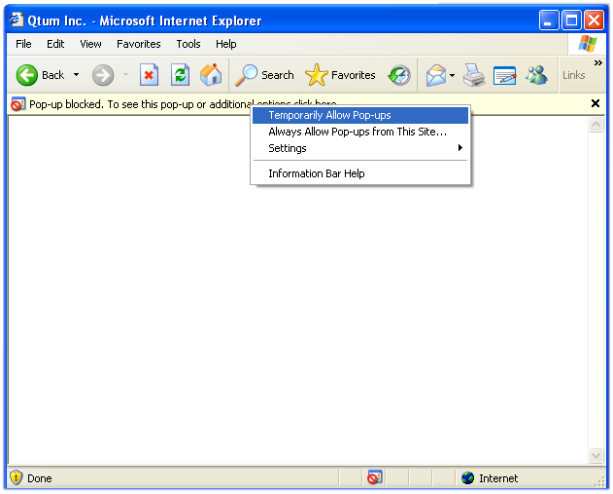


Select “ Automatic Prompting for Active X Controls”-> Disable

2) Connection


Qtum Inc. - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Links
Pop-up blocked. To see this pop-up or additional options click here...
Done
Internet

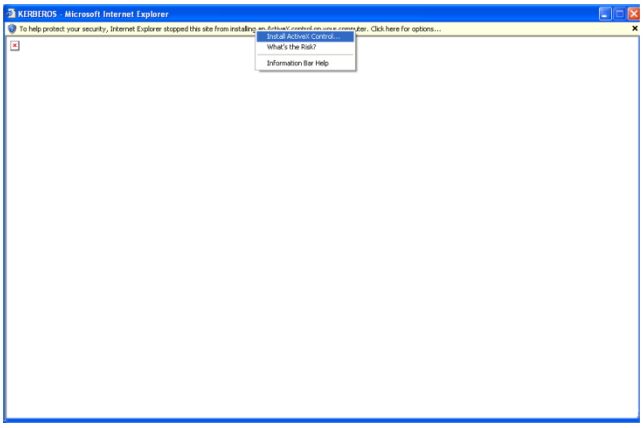
Click here as described


Qtum Inc. - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Links
Pop-up blocked. To see this pop-up or additional options click here...
Temporarily Allow Pop-ups
Always Allow Pop-ups from This Site...
Settings
Information Bar Help
Done
Internet

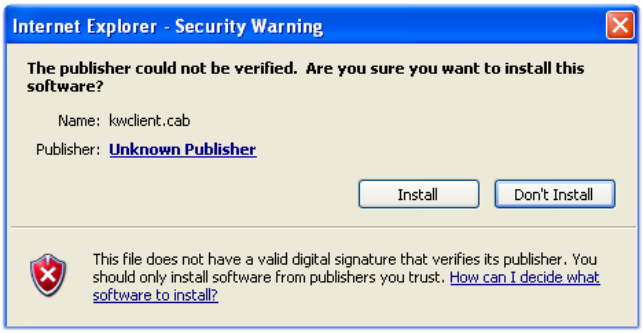
Select “Temporary Allow Pop-ups”

KERBEROS - Microsoft Internet Explorer
To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...

Click “To help protect security, Internet Explorer stopped this site from installing an Active X control on your computer. Click here for options…”


KERBEROS - Microsoft Internet Explorer
To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...
Install ActiveX Control...
What's the Risk?
Information Bar Help

Select “Install Active X Control “


Internet Explorer - Security Warning
The publisher could not be verified. Are you sure you want to install this software?
Name: kwclient.cab
Publisher: Unknown Publisher
Install
Don't Install
This file does not have a valid digital signature that verifies its publisher. You should only install software from publishers you trust. How can I decide what software to install?

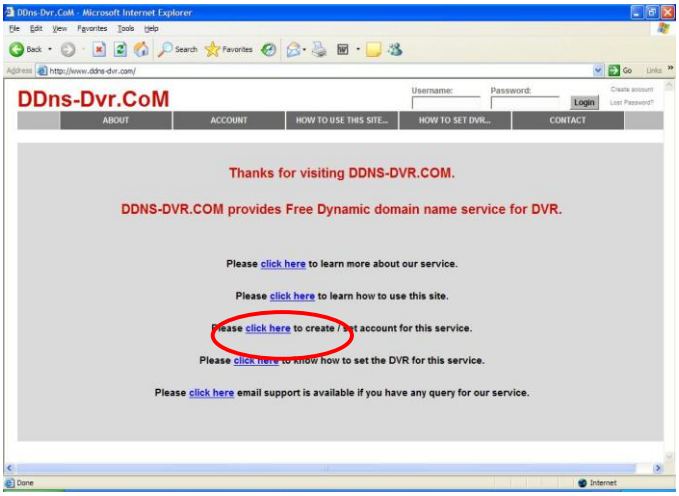
Select “Install” and then ‘Log-In’ box will be shown.

APPENDIX 3

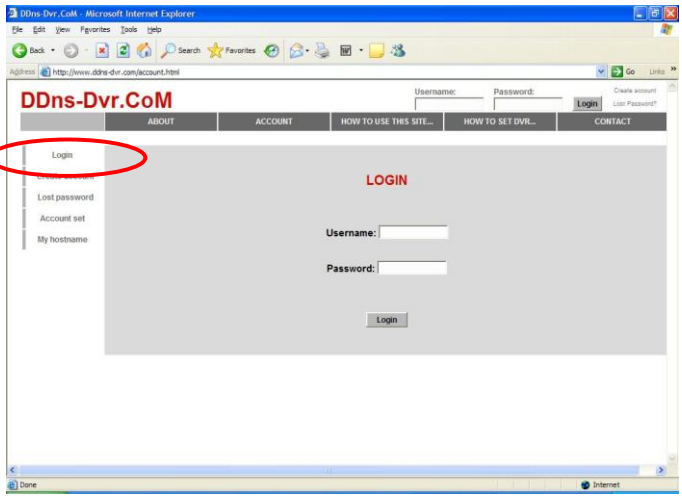
DYNAMIC IP (Supporting DDNS Server)

With DDNS Server, This allows a user to connect to the unit remotely without the need for a fixed IP address.(Please register your ID & Domain at www.ddns-dvr.com in which you can use their DDNS server as free of charge)

1. Visit www.ddns-dvr.com to get the DDNS user ID & PW as well as Host name.

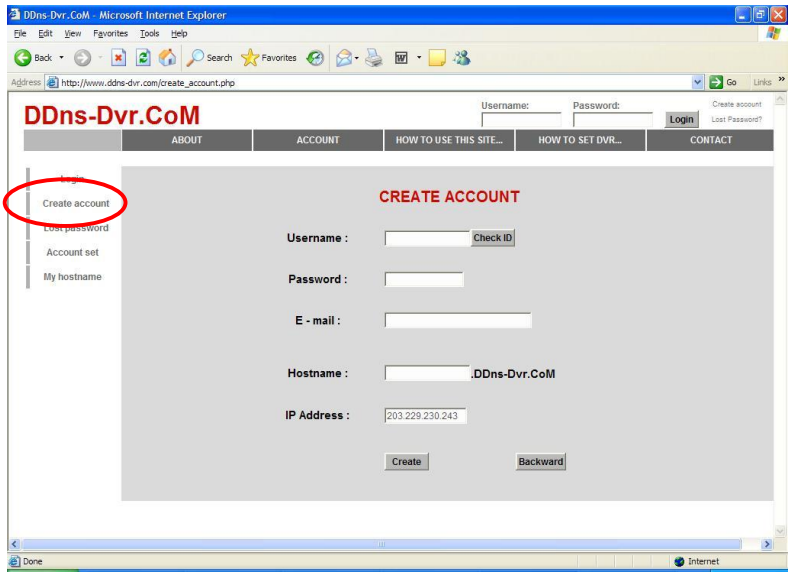

DDns-Dvr.CoM - Microsoft Internet Explorer
DDns-Dvr.CoM
Username:
Password:
Login
ABOUT
ACCOUNT
HOW TO USE THIS SITE...
HOW TO SET DVR...
CONTACT
Thanks for visiting DDNS-DVR.COM.
DDNS-DVR.COM provides Free Dynamic domain name service for DVR.
Please click here to learn more about our service.
Please click here to learn how to use this site.
Please click here to create / set account for this service.
Please click here to know how to set the DVR for this service.
Please click here email support is available if you have any query for our service.

2. Click to create / set account of “Dynamic DNS”.



3. Select “Create Account” menu.

4. Create Account.



> Fill in all blanks in order to create new account.
ID & Password will be emailed to you when the account is setup correctly.

Once the DDns-Dvr account has been setup, it is necessary to add the details in the Network section of the Quantum’s menus.

DDNS SET

To enter Network set menu, system ask password (Default is 00000000).

In DDNS environment, need to be changed DVR & Web server port, please refer to IP set.

Set up DDNS

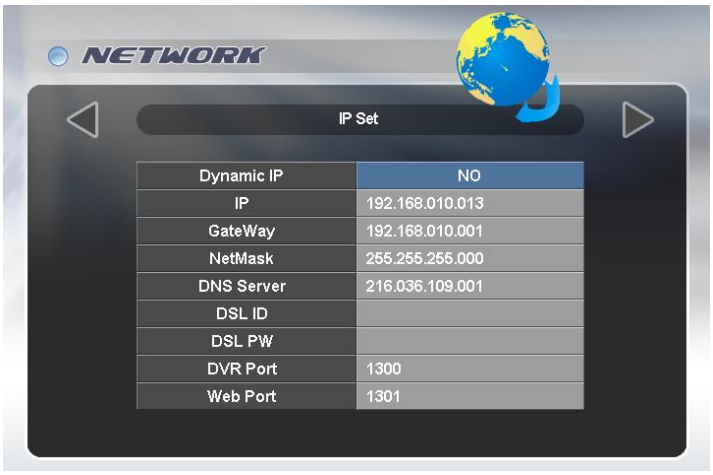
1. Change DDNS to ON
2. Input User ID
3. Input User PW
4. Input Domain
5. Click “DDNS Status Check” if it is “ok” Click “Apply”

> Note; In DDNS Setup, The Domain Name has to be filled in.

Appendix 4

SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER

(Port Forwarding)



1) To use IP sharing Router, “Use Dynamic IP” should be set to “NO”.

- DVR Port: This can be set to any number between 2000 to 65535.
- Web Server Port: this can be set to any number between 2000~65535, as long as it is not the same as the DVR Port number

2) Setup “virtual server” on IP sharing Router

It is for setting virtual server to forward IP which is allotted to DVR.

> For example,

DVR-1, IP : 192.168.10.107, DVR Port : 7000, Web Server Port : 7001

If DVR-1 is configured as above, the virtual server on IP sharing router is as follows.

1) PC Server Name : DVR-1(IP 192.168.10.107)

Protocol : TCP, Internal Port : 7000, External Port : 7000

2) PC Server Name : DVR-1 (IP 192.168.10.107)

Protocol : TCP, Internal Port : 7001, External Port : 7001

* For more detail, please refer to relevant IP sharing manual.

(3) ‘DDNS’ Setup on IP sharing router

DDNS configuration is not needed in case of fixed IP.

(4) To connect DVR-1 with Internet Explorer, http://dvr-1.ddns-dvr.com:7001,

to connect DVR-1 with CD installer, http://dvr-1.ddns-dvr.com:7000.

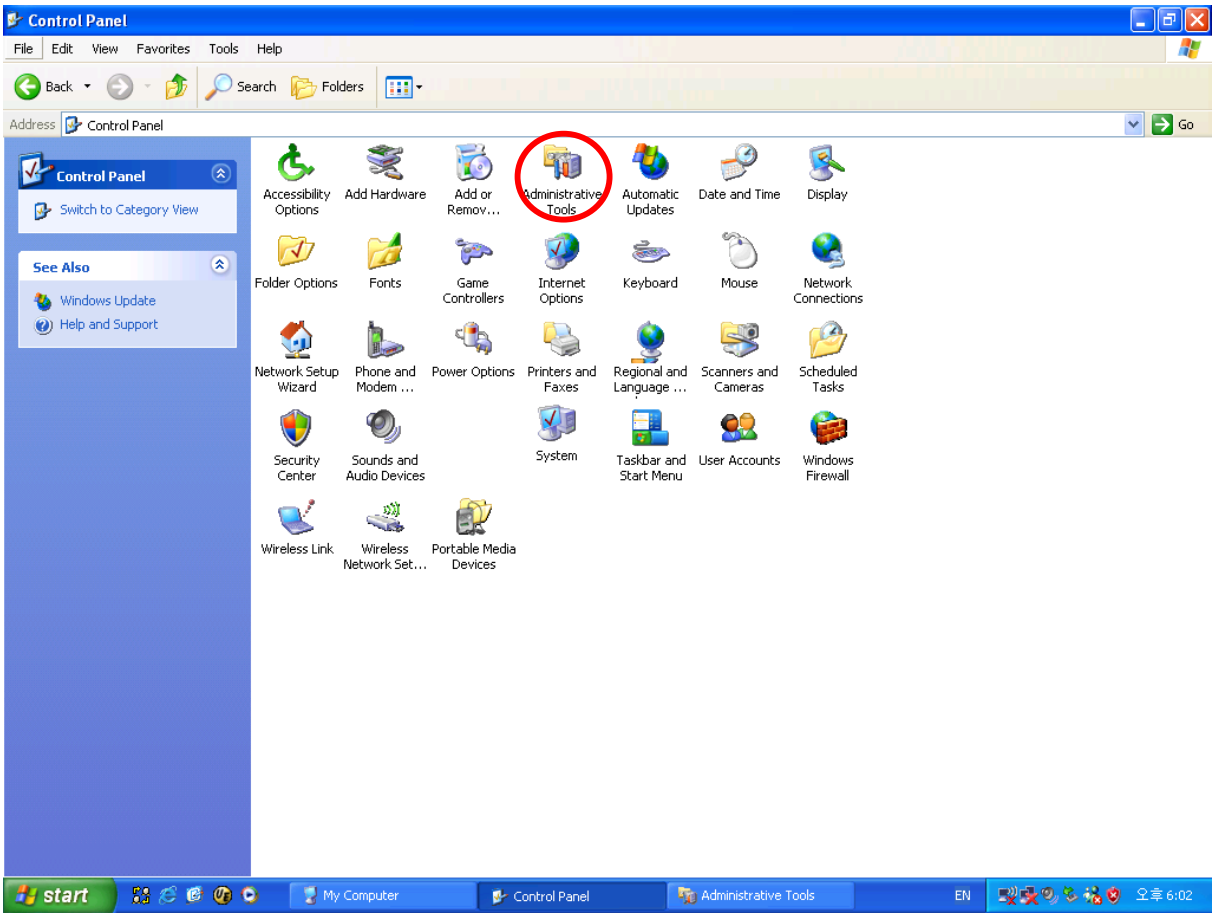
APPENDIX 5

MAKING A PARTITION ON AN EXTERNAL USB HARD DRIVE

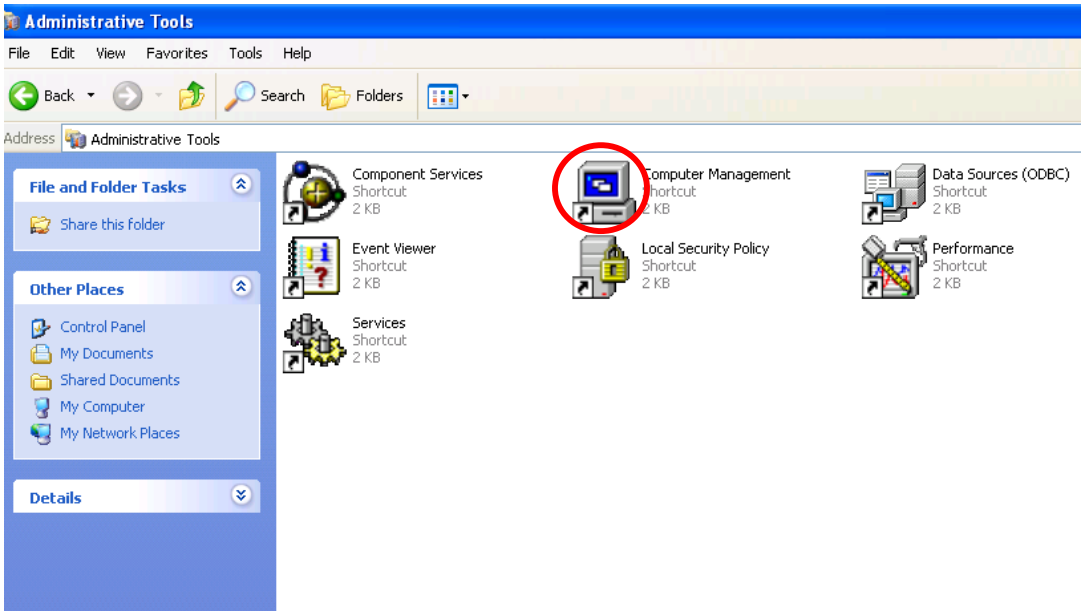
To back up to USB HDD, the USB HDD should be formatted first on PC. The Quantum EVO supports the FAT32 & NTFS file system, of which maximum size is 500GB for one partition. Please refer to the following procedure to make a partition and format on PC.

*If the HDD capacity is under 500GB, you don't need to make a partition and simply connect to the DVR directly.

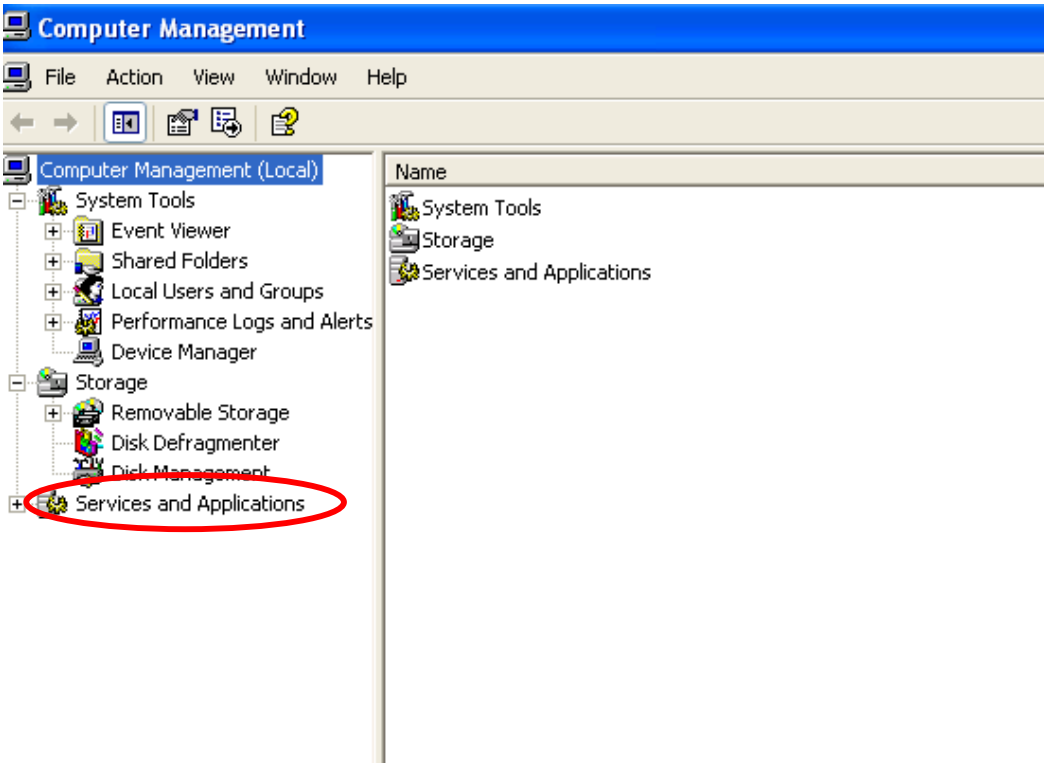
1. Select Control panel-> administrative Tools.



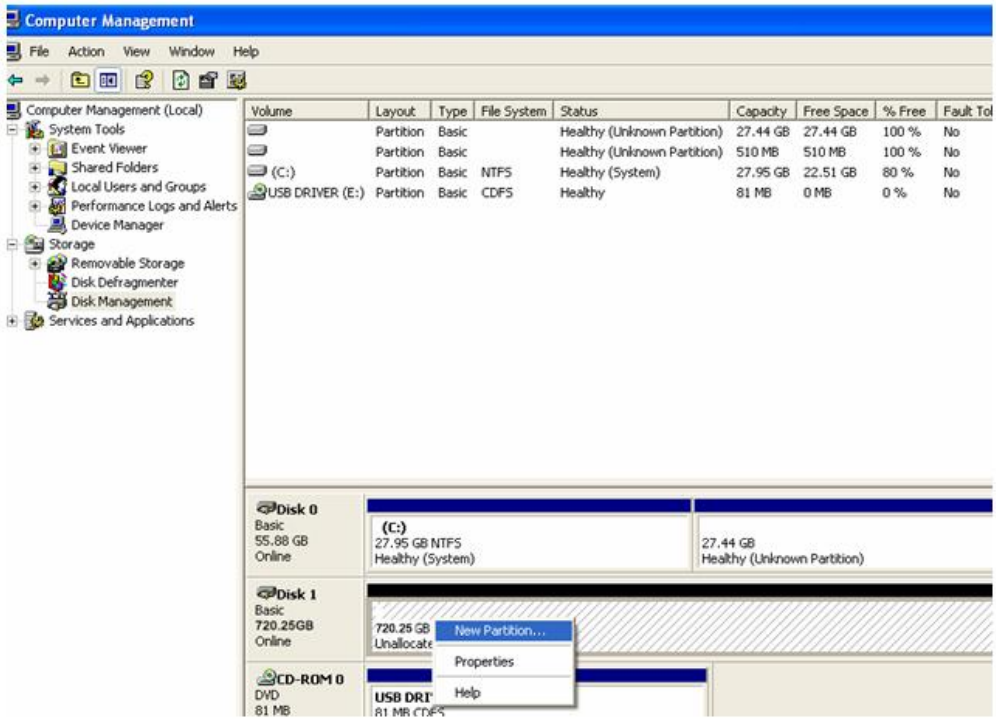
2. Select “Computer Management”



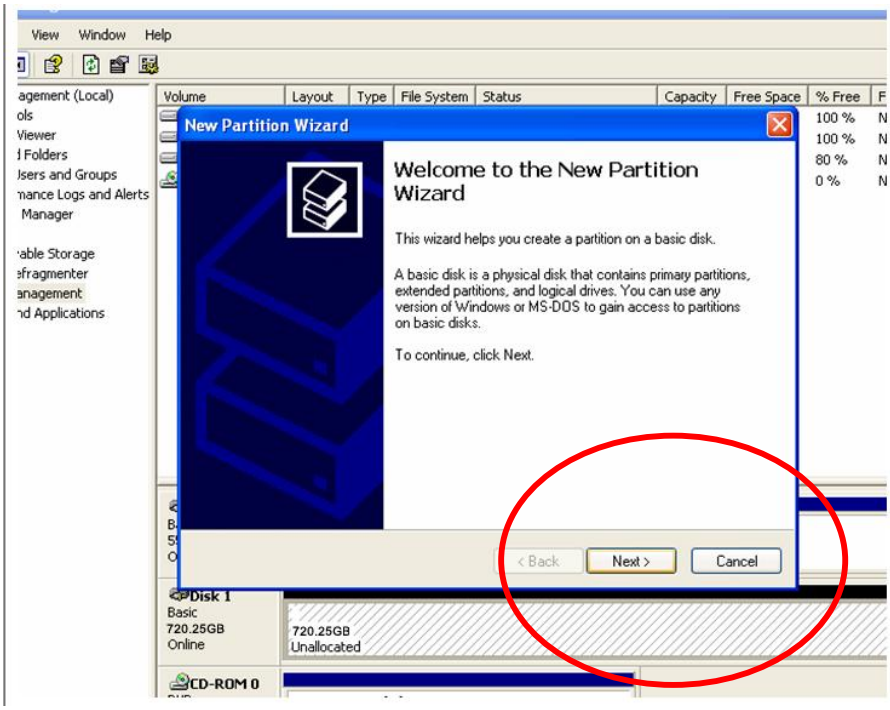
3. Select “Disk Management”.



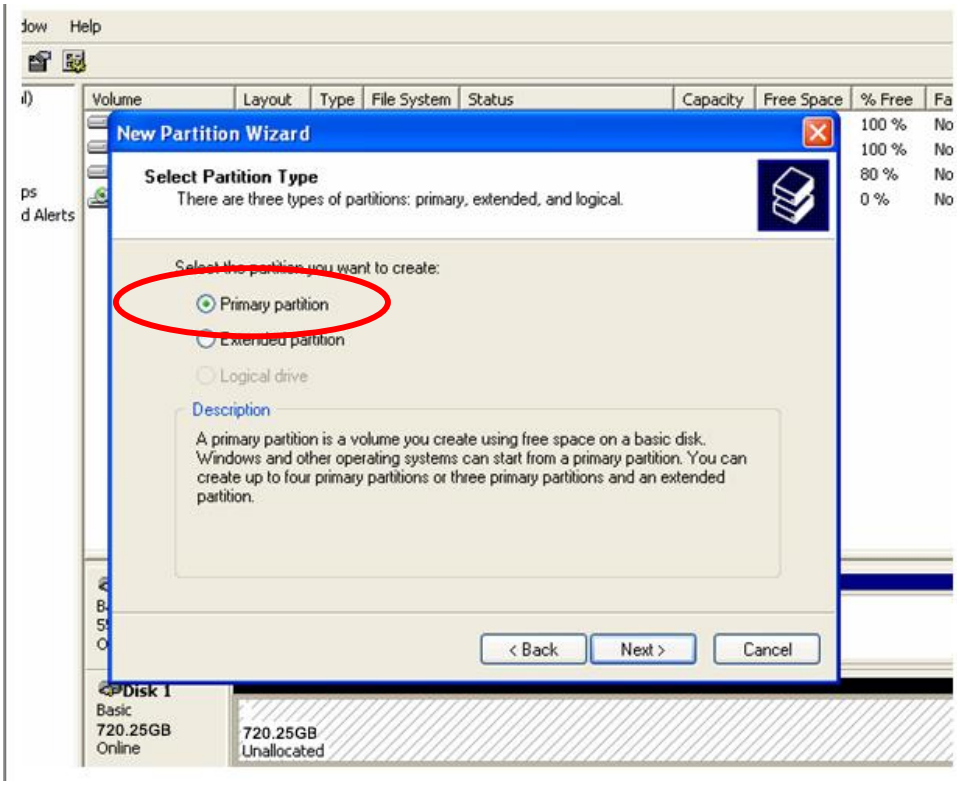
4. Click right mouse button and select “New Partition”.



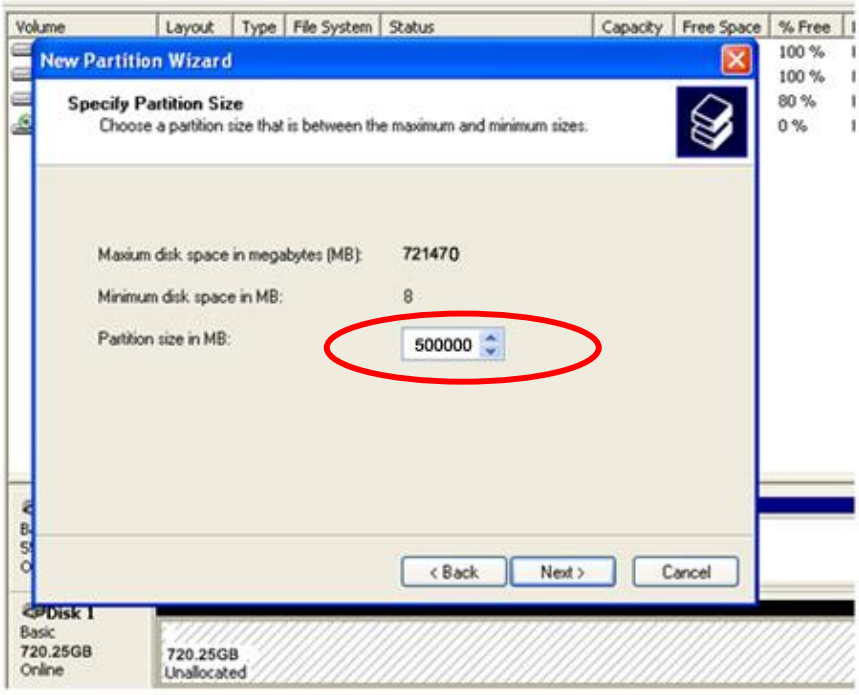
5. Follow “New Partition Wizard” procedure as below.


View Window Help
Volume Layout Type File System Status Capacity Free Space % Free
New Partition Wizard
Welcome to the New Partition Wizard
This wizard helps you create a partition on a basic disk.
A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. You can use any version of Windows or MS-DOS to gain access to partitions on basic disks.
To continue, click Next.
< Back
Next >
Cancel
Disk 1
Basic
720.25GB
Online
720.25GB
Unallocated
CD-ROM 0

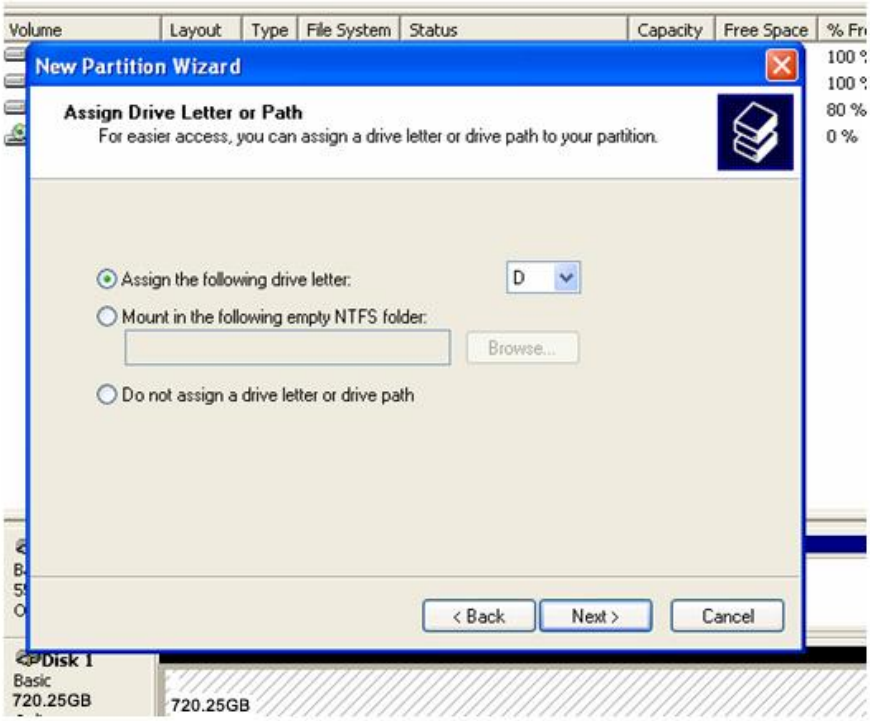
6. Select the Primary partition option.


New Partition Wizard
Select Partition Type
There are three types of partitions: primary, extended, and logical.
Select the partition you want to create:
Primary partition
Extended partition
Logical drive
Description
A primary partition is a volume you create using free space on a basic disk. Windows and other operating systems can start from a primary partition. You can create up to four primary partitions or three primary partitions and an extended partition.
< Back
Next >
Cancel
Disk 1
Basic
720.25GB
Online
720.25GB
Unallocated

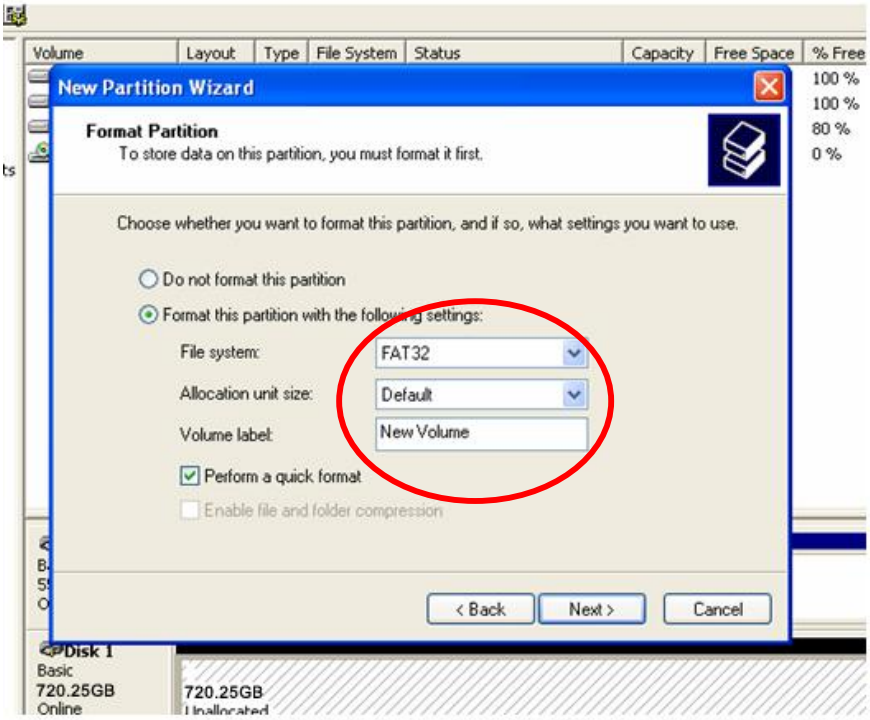
7. Maximum is 500GB at FAT32 file format.



8. Assign drive letter

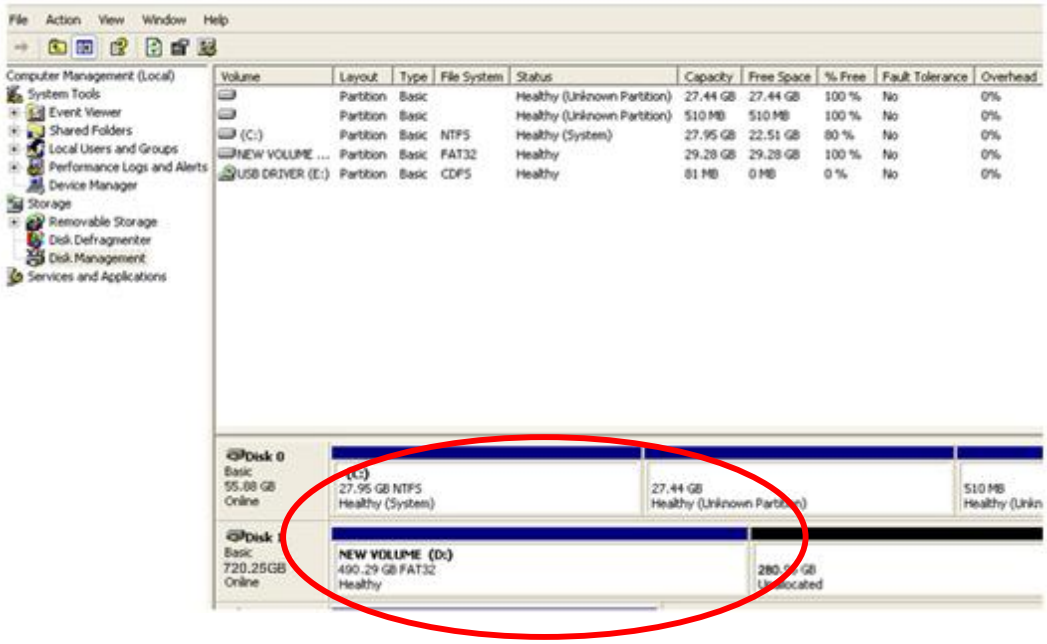


9. Format the partition to FAT32

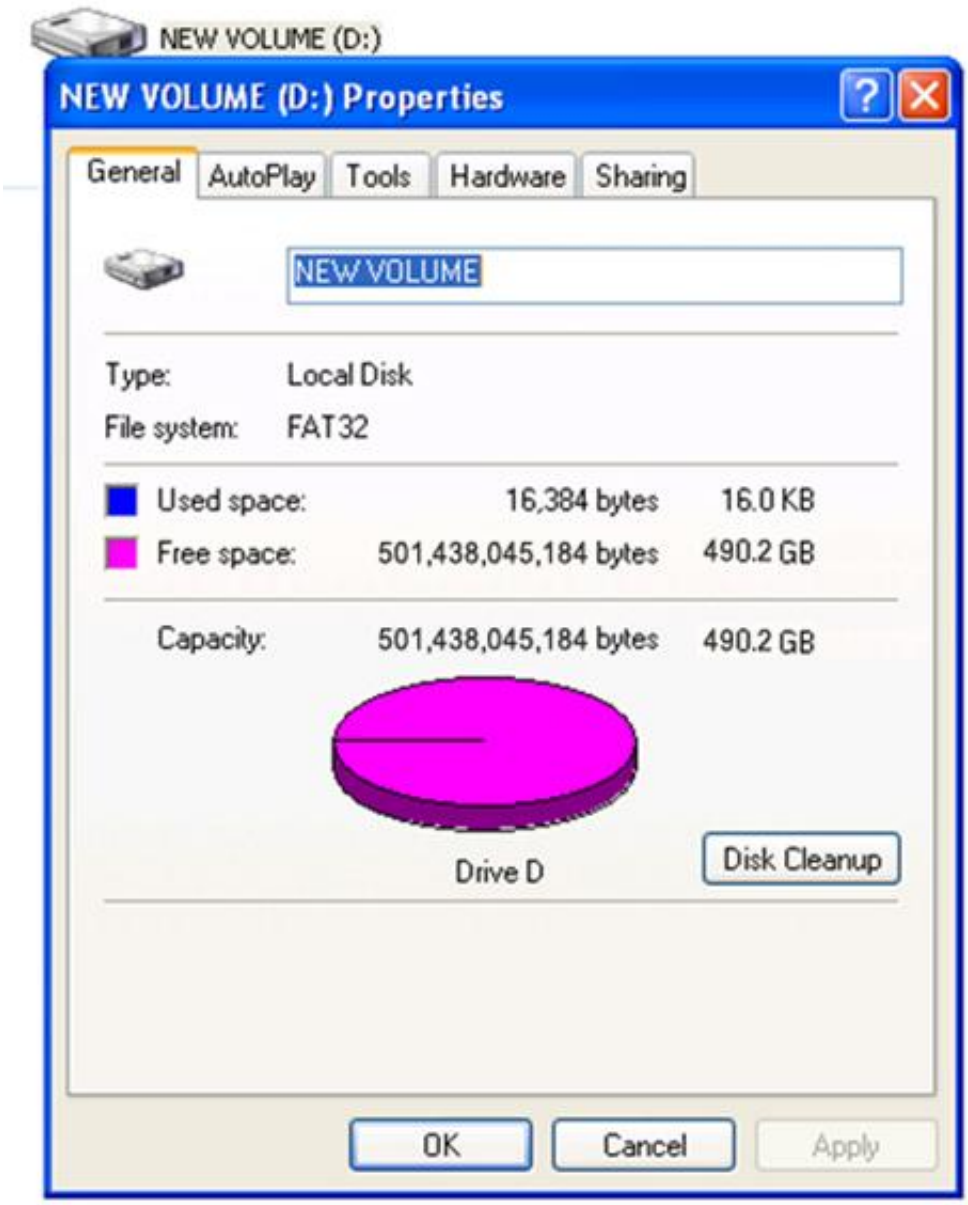


10. At this stage, New Partition has been made.

11.Check New partition was created correctly.(Format will run automatically)



12. Check New Partition was created correctly



NORBAIN SD LTD
210 Wharfedale Road
Winnersh Triangle
Wokingham
Berks
RG41 5TP
01189 125 000

Subject to change without notice